RAILWAY AGE

MAY 1, 1948

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A good team for the long haul . . .

STAYBOLT IRON • WROUGHT IRON PIPE

Maintenance of the 38,000 steam locomotives now in service is a highly important job. These units handle a major part of railroad haulage, so that keeping repairs down and availability up has a vital bearing on operating efficiency and profits.

Byers Wrought Iron is a big help in getting longer service from motive power, and is used by major railroads in a variety of services including piping, staybolts, drawbars, safety-bars, spring hangars and bands, equalizers . . . almost everywhere, in fact, where corrosion, shock or vibration are threats to service life. The superior durability of wrought iron is attested by the record. One railroad, for instance, averages less than one wrought iron staybolt replaced per locomotive per year. Another set up a 100% wrought iron specification for all locomotive piping.

The ability of wrought iron to combat corrosion, vibration and shock comes from its physical character. Tiny threads of glass-like silicate slag, distributed through the body of high-purity iron, give a structure like that of a stranded wire cable, that is unusually resistive to fatigue. The fibers also halt and "detour" corrosive attack, thus discouraging local pitting.

If you would like any specific information on how Byers Wrought Iron pipe, Byers Staybolt Iron, Byers Forging Billets, or other Byers products would fit into your locomotive maintenance program, just get in touch with the nearest District Office.

A. M. Byers Co., Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, Salt Lake City, Seattle, San Francisco. Export Division: New York, N.Y.

BYERS

GENUINE WROUGHT IRON

TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE QUALITY ALLOY AND STAINLESS STEEL PRODUCTS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

"BUFFALO"

UNIT BRAKE BEAM

NEVER UNDERESTIMATE THE WORD

"BUFFALO" WHEN YOU THINK OF UNIT BRAKE BEAMS

- "Buffalo" is the ORIGINAL Unit Brake Beam
- "Buffalo" is the TIME-TESTED Unit Brake Beam
- "Buffalo" is the SERVICE-TESTED Unit Brake Beam

Since 1937 more than 310,000 of these sturdy, solid-truss Unit-type "Buffalo" Brake Beams have been bought by 86 railroads and private car lines.

Less than 1/10 of 1% of these beams were specifically bought for stand-by stock or repairs.

NO OTHER BRAKE BEAM CAN APPROACH THAT RECORD! "Buffalo" Units definitely STAND UP.

BUFFALO BRAKE BEAM CO.

140 Cedar Street **New York**

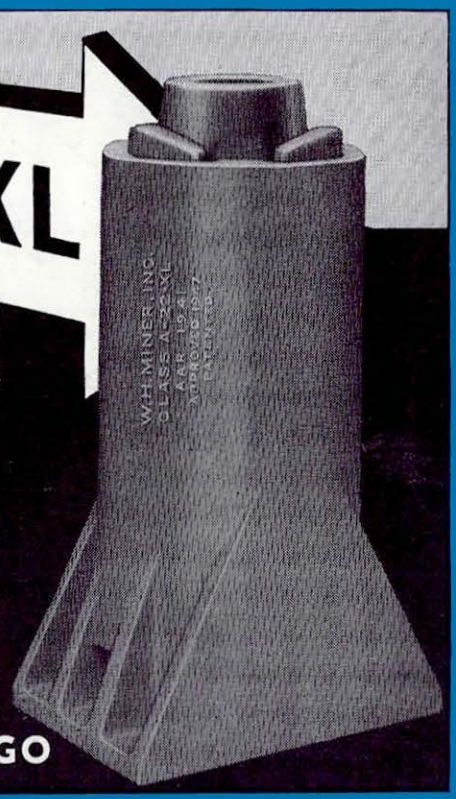
Published weekly by Simmons-Boardman Publishing Corporation, Orange, Conn. Executive Offices, 30 Church Street, New York 7, N. Y. Entered as second class matter at Orange, Conn., under the act of March 3, 1879. Subscription price $6.00 for one year. U. S. and Canada. Single copies, 50 cents each.
Vol. 124, No. 18

CLASS A-22-XL

MINER

Friction Draft Gear

- Approved by Association of American Railroads.
- 24 percent greater capacity than required by A.A.R.
- Patented triple locking arrangement eliminates retaining bolt.
- Less weight.

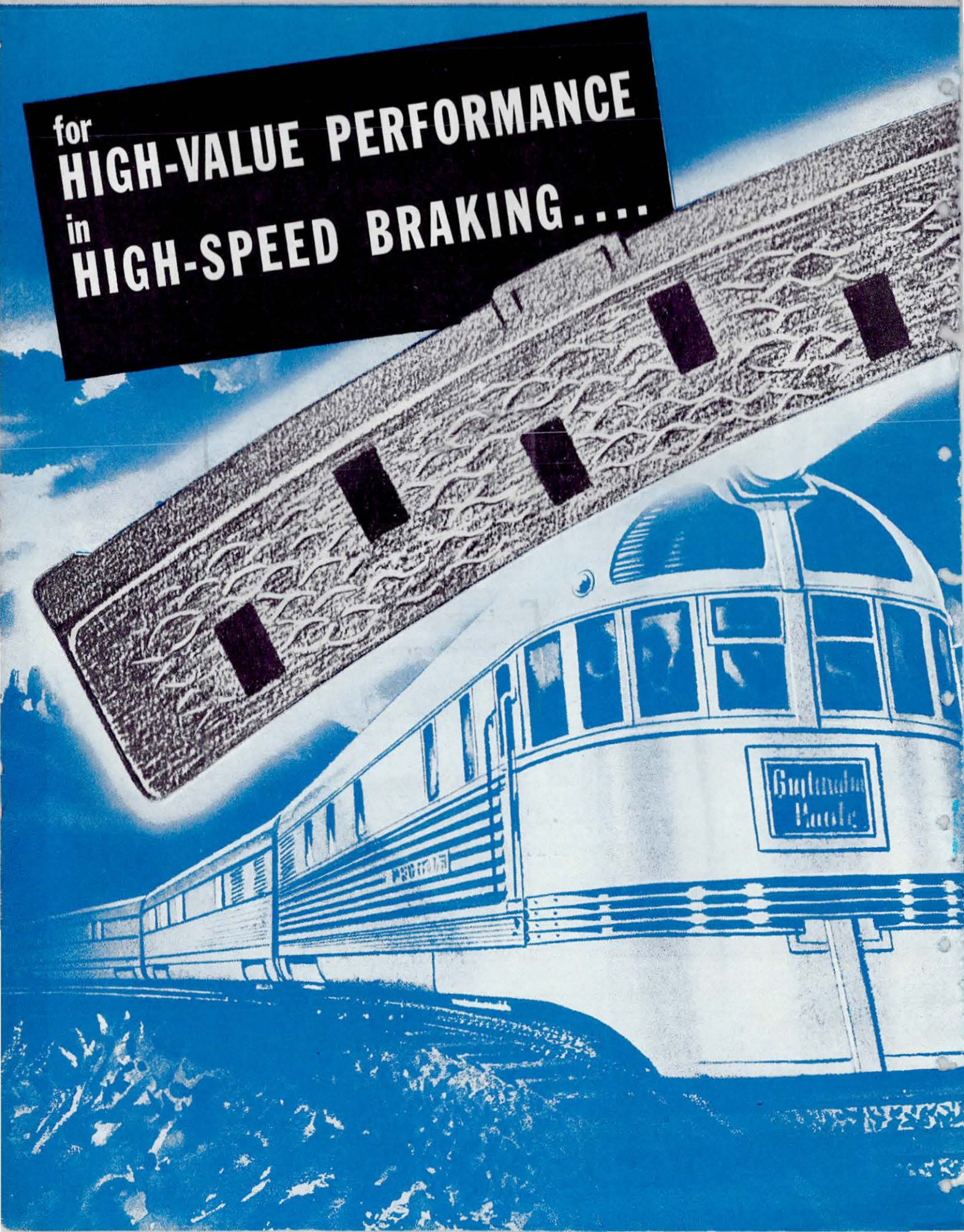


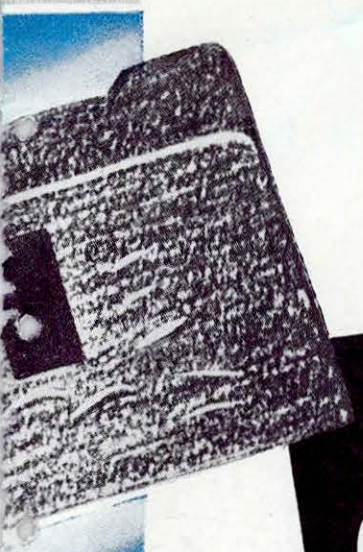
W. H. MINER, INC. CHICAGO

"Brake Shoe research serves you today and anticipates tomorrow"

Wm. B. Given, Jr., President

for HIGH-VALUE PERFORMANCE in HIGH-SPEED BRAKING....





... the CARBON INSERT BRAKE SHOE

The Carbon Insert brake shoe, another product of Brake Shoe research, is designed for the most efficient operation on high speed equipment. Continuing service on Diesel locomotives and passenger cars has demonstrated its high value performance particularly where speeds are above 60 M.P.H.

The Carbon Insert brake shoe gives uniform friction of a high value throughout the speed range. The brake shoe wear is less and the wheel tread condition is improved during high speed stops. American Brake Shoe Company, 230 Park Ave., New York 17, N. Y.

AMERICAN Brake Shoe COMPANY

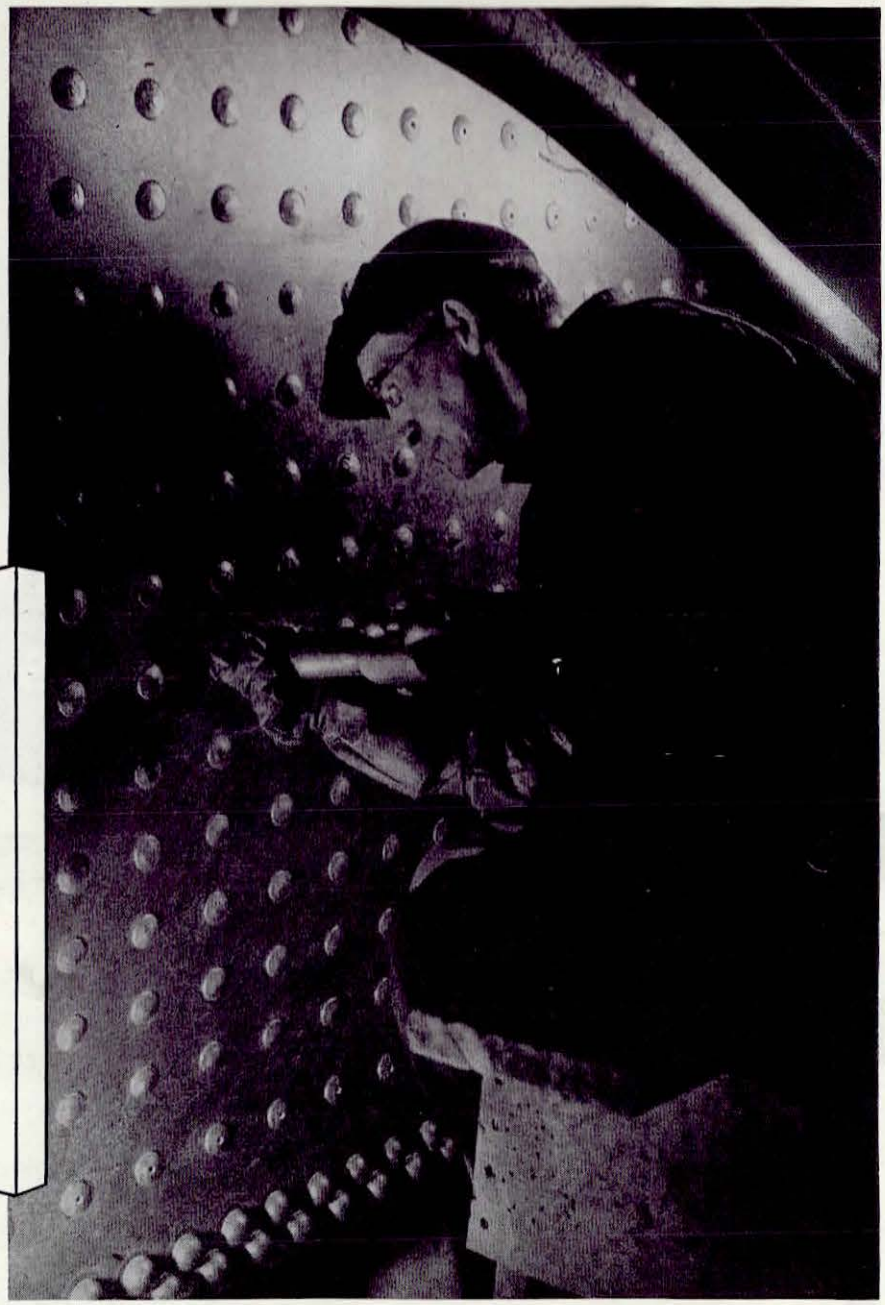
BRAKE SHOE AND CASTINGS DIVISION

6482

Reduce Staybolt Cost...

use

MAYARI
(RHYMES WITH "FIERY")
STAYBOLT STEELS



Staybolts made from Mayari Staybolt Steels cost only a fraction as much as those made from the material heretofore in general use.

Many railroads have taken full advantage of this saving. Some have been steady users of Mayari Staybolt Steels for the past 10 years.

Other roads are now proving their low cost and long service-life in various test installations, comparing the performance of Mayari Steel Staybolts with that of staybolts made from the higher priced materials.

Staybolts made from Mayari Staybolt Steels have high tensile-strength and yield-point values. They have excellent ductility and good resistance to fatigue. They are suitable for conventional heading or seal-welding.

From every standpoint Mayari Staybolt Steels are equal or superior to other materials. Consider these advantages and check the cost of using them in your own hard-working steam motive power.

Full information on these modern staybolt steels is available from any of our sales offices. Write or phone.

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.
On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor:
Bethlehem Steel Export Corporation

AIRFOAM LIFTS YOU UP

PRESS DOWN ON AIRFOAM and you'll feel it lift back. Lift your hand and **Airfoam** rounds back into shape — you can't crush it. Its millions of tiny elastic air cells "breathe in" to meet every point of body pressure, conform to every change of posture — to give you super-cushioning comfort!

Makes Every Seat a De Luxe Seat...

Drives Down Maintenance Costs, Too!

How AIRFOAM, Goodyear's aerated latex cushioning, does a double job for railroads.

THE amazing record of latex-cushioned seats during the tough war years put it in number one place, in the opinion of railroad men, as the best cushioning for railroad usages.

And it's not hard to see why more and more railroads specify **AIRFOAM**, Goodyear's aerated latex cushioning. Two good reasons back their choice:

(1) **AIRFOAM** cushioned seats and mattresses cradle passengers in super-comfort that makes the miles go pleasantly by—builds good will for your line.

(2) Maintenance costs are cut to the bone by **AIRFOAM's** amazing durability. It keeps its shape and comfort, doesn't sag or lump —actually makes upholstery last longer.

AIRFOAM cushioning is by far the most economical cushioning you can specify. For full information and prices, write Goodyear, Manufacturers' Sales Dept., Akron 16, Ohio.

Airfoam—T.M. The Goodyear Tire & Rubber Company

1898 GOODYEAR 50 ANNIVERSARY 1948

Airfoam

SUPER-CUSHIONING BY GOODYEAR

THE GREATEST NAME IN RUBBER

For renewing the old

Plymetl FITS THE

When the St. Louis-San Francisco Railway rebuilt cars 1203, 1207, 1208 and 1213, the inside finish was provided by Haskelite. PLYMETL was specified for doors (interior, end and vestibule); partitions, bulkheads, pier panels, upper and lower wainscoting, and end panels. Other Haskelite materials were specified for upper deck panels, air ducts and floors.

Frisco men estimate that in Car 1208 (illustrated) considerably more than 7500 pounds were saved by using Haskelite interior finish instead of hollow-steel partitions and paneling. Weight saved by Haskelite floor construction alone was 1400 pounds. And this weight saving was accomplished without sacrificing safety.

The "Frisco" railroad was so well pleased with the performance of Haskelite materials in the rebuilt cars that they have been specified for the same applications in 38 new streamlined cars now on order. The "Frisco" anticipates an equal or greater saving in weight in these new cars. In a 12 car train, this means a weight saving of more than 45 tons. Here, indeed, is proof of the "light touch" of PLYMETL.

PLYMETL — The metal-clad plywood.

Illustrated below is an exterior view of Car 1208. This coach operates between St. Louis and Oklahoma City on the Frisco's Meteor.

Write for *"Plan with Plymetl"*

The new "Plan with Plymetl" catalog contains complete information on use, fabrication, fastening, and finishing of Plymetl. Write for your free copy today.

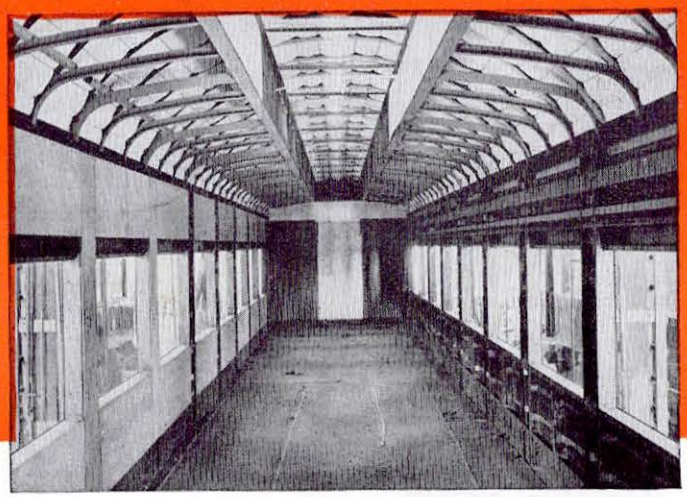
or building the new

PICTURE

The view below shows one end of the interior of Car 1208 with Plymetl bulkhead installed. Plymetl wainscoting and pier panels are in the process of installation.

The interior view above shows modern appearance of Car 1208. Note the smooth surface of the upper deck panels.

The other end of this car is pictured at the right. Plymetl bulkhead, pier panels and wainscoting illustrated.



HASKELITE MANUFACTURING CORPORATION

Department RR-12 **Grand Rapids 2, Michigan**

NEW YORK CHICAGO DETROIT CLEVELAND ST. LOUIS PHILADELPHIA BOSTON LOS ANGELES
CANADA: Railway & Power Engineering Corporation, Ltd.

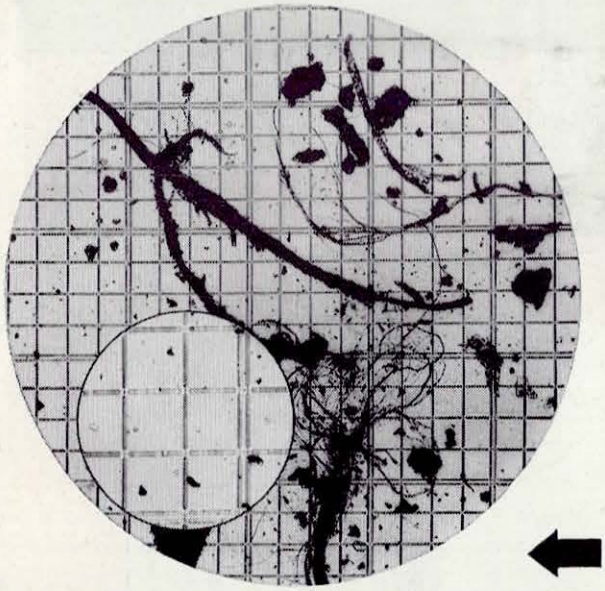
Bowser Systems for Railroad Liquids

Diesel Fuel Filtration & Dispensing

"If it rolls on wheels and uses liquid fuels, Bowser can fuel it."

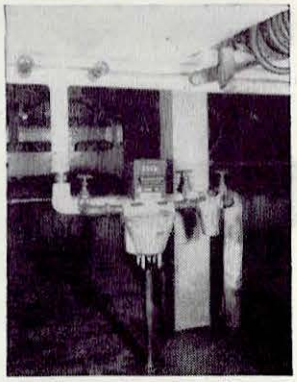
Since 1885 Bowser has specialized in the design and manufacture of liquid handling equipment. Bowser's special railroad representatives work closely with railroads on any liquid storage, pumping, filtering, metering, recording and fueling problem. As a result, Bowser equipment is now operating efficiently, cutting costs and improving service in most railroad oil houses, service ramps and wherever railroad liquids are handled.

Bowser has supplied much of the equipment used for many of the prominent Diesel streamliners. Bowser equipment handles fuel from the time it is received until it is delivered to the locomotive. Accurate meters, with or without temperature compensating dials, ticket printers for delivery records, filters, power pumps, fittings, hose, nozzles and all accessories are included in Bowser engineered systems to do the complete job.



Bowser Filters Remove Dirt—Deliver Clean Fuel

Metered, Recorded Deliveries of Lube Oil Cut Lubing Cost

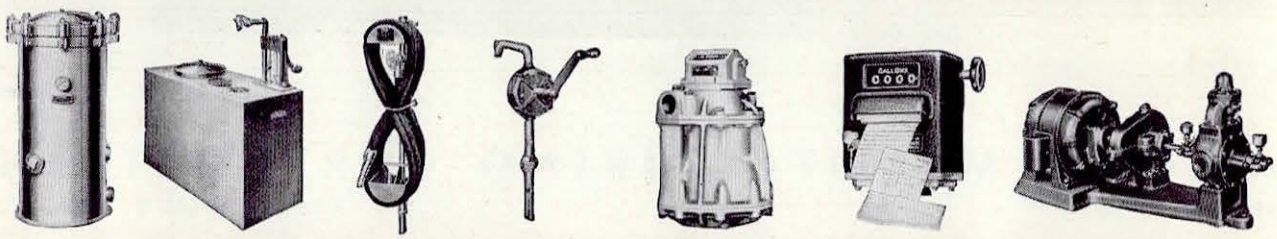


This modern lube oil installation consists of a Bowser Xacto Meter with ticket printer, strainer, valves and hose reel with delivery nozzle. Note that pipes are insulated to maintain fluidity of the oil.

Bowser's Finer Filtration Costs Less

Efficiency, proved in railroad tests totaling over 6,000,000 gallons, proves Bowser filtration costs less than 5¢ per 1000 gallons! Bowser filters out particles as small as ½ micron (.00002 inch), and removes colloidal sludge.

STORAGE PUMPING FILTERING METERING RECORDING FUELING



FUEL FILTERS PETROLEUM PUMPS FOG THROWERS BARREL PUMPS XACTO METERS TICKET PRINTERS ROTARY POWER PUMPS

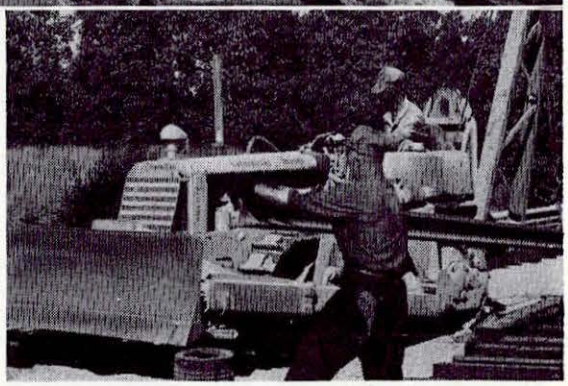
BOWSER, INC. — FORT WAYNE, IND.

"Gosh! What'll these Tractors do next?"

With new or modernized auxiliary equipment constantly coming along, "Caterpillar" track-type Tractors have extended their usefulness far beyond their original scope. Their greatly increased versatility is benefiting railroads no end—especially in right of way equipping and maintenance. These tractors find things to do even before they climb down off the work train—as witness the scenes above.

There, in the Pere Marquette district of the C. & O., a D6, equipped with a recently introduced Hystaway, is seen starting out by stringing 39-ft., 110-lb. rails at the swift rate of 100 to 120 per hour. Only a vivid imagination can picture all the other jobs it can take on after it hits the dirt. With bucket, clamshell, hooks or sling, it can handle ballast, build shoulders and culverts, move bundles of ties, et cetera. With Hystaway demounted (accomplished in an hour or less), the jobs it can do with the bulldozer are equally varied. "It's great stuff!" say section men.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS

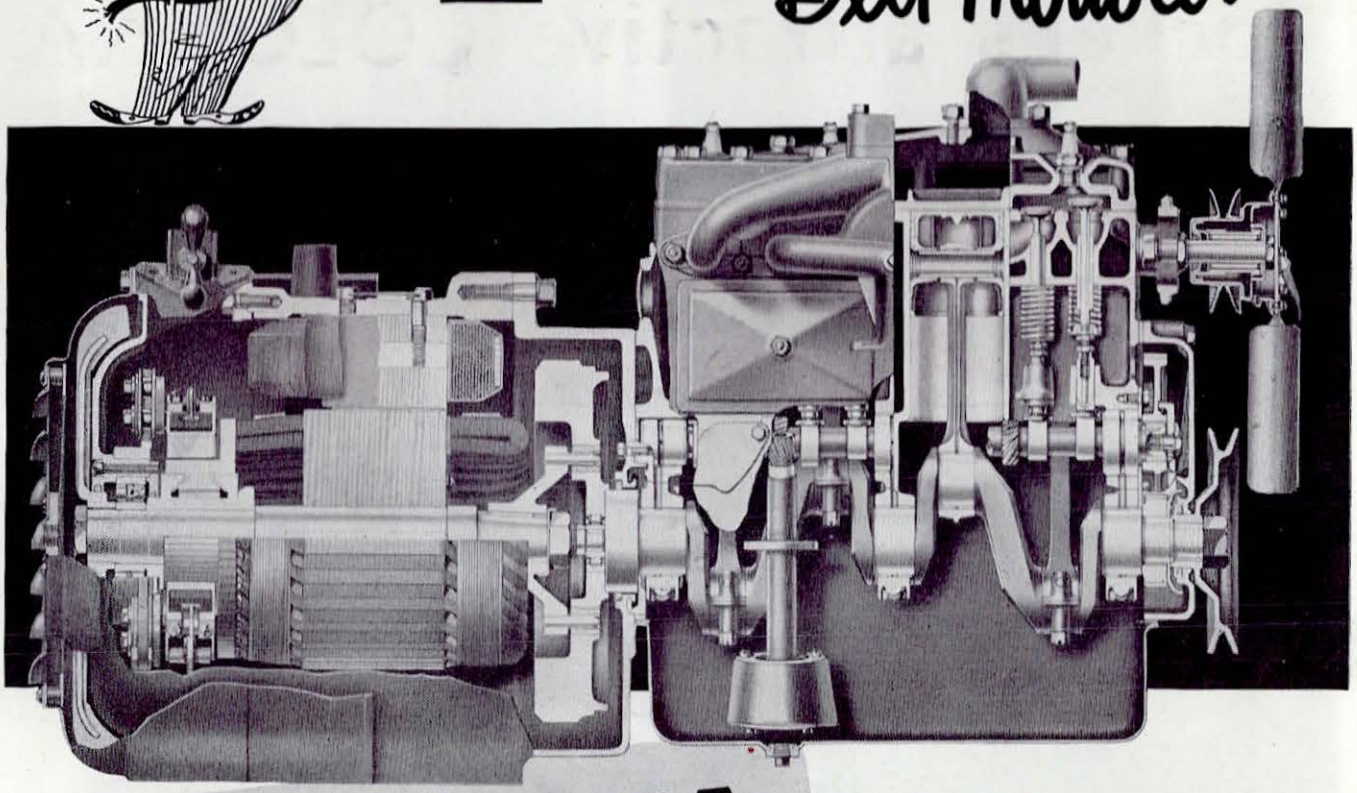


"CATERPILLAR" D4 WITH BULLDOZER AND HYSTER SIDE BOOM is another unit that is writing records of versatility and efficiency for the C. & O. Here it is shown laying rails. It also works with stone boat to distribute material for new trackage. (Price of the standard model D4, with gasoline starting engine, is $3925; the D6, $6240—both without auxiliary equipment. Both prices F.O.B. Peoria, subject to change without notice.)

CATERPILLAR DIESEL ENGINES • TRACTORS MOTOR GRADERS EARTHMOVING EQUIPMENT

REG. U. S. PAT. OFF.

ARE YOU HAVING *Belt Trouble?*



WAUKESHA
7½ KW *Engine-Generator*
Independently Powered • Direct Drive

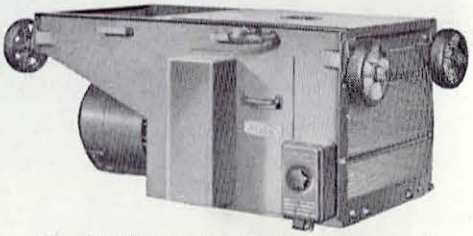
● Why keep on piling a parasite load on your train locomotive with an axle driven generator? Save that power for pulling payload.

The Waukesha Engine-Generator is a self-contained power plant which operates on propane gas. It is entirely independent of car movement or location . . . or the locomotive itself. 7½ KW capacity, 32-V or 64-V DC. Automatically it maintains full voltage under all conditions. It keeps fans and other motor driven appliances up to full speed . . . lights up to full brilliancy . . . as long as there's propane in the fuel system. Always 100% available the Waukesha Engine-Generator maintains battery without standby service or yard charging facilities.

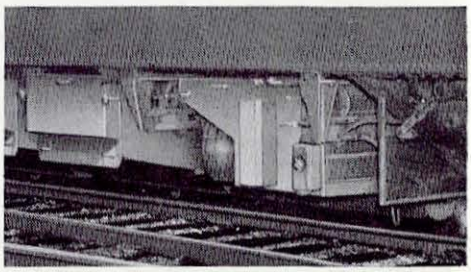
Long-time railway users of Waukesha Engine-Generators have been able to reduce battery sizes from the conventional 1200-1500 amp-hr weighing from 3000-4000 lb., to 450 amp-hr—less than one-third the size with a saving in weight of 2200 to 3200 lb.

Get rid of axle driven mechanism of all kinds, whether belt or mechanical, with their unreliability and constant need for servicing. Install lightweight, compact, quiet, dependable, automatic and entirely independent Waukesha Engine-Generators.

The result of more than ten years' experience on more than thirty major railroads—no Waukesha Engine Generator has ever been replaced by any competing make. Write for literature. And find out about the Waukesha 32.5 KVA Diesel Alternator, too.



7½ KW Waukesha Engine-Generator Unit, 32-V, or 64-V DC in cushion-mounted cabinet. Rolls out for inspection.



Waukesha Engine-Generator with fuel cabinet. Cushion-mounted beneath car, it rolls out readily for inspection or servicing.

Railway Division

WAUKESHA MOTOR COMPANY

WAUKESHA, WISCONSIN

Largest Builders of Mobile Engine-Driven Refrigeration and Generator Equipment

"Have Another" suggests the Rocket's attractive COLONNA service bar...

Rock Island

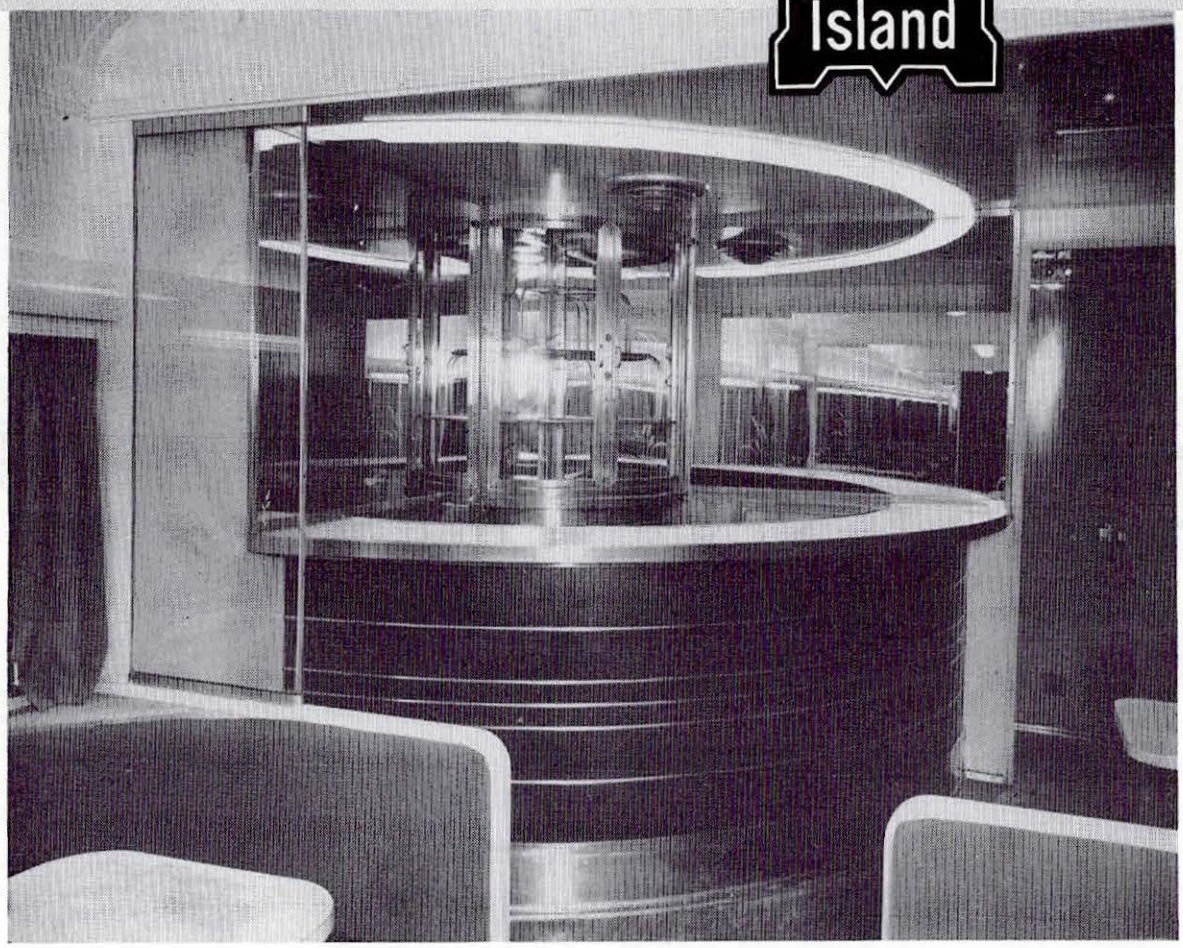
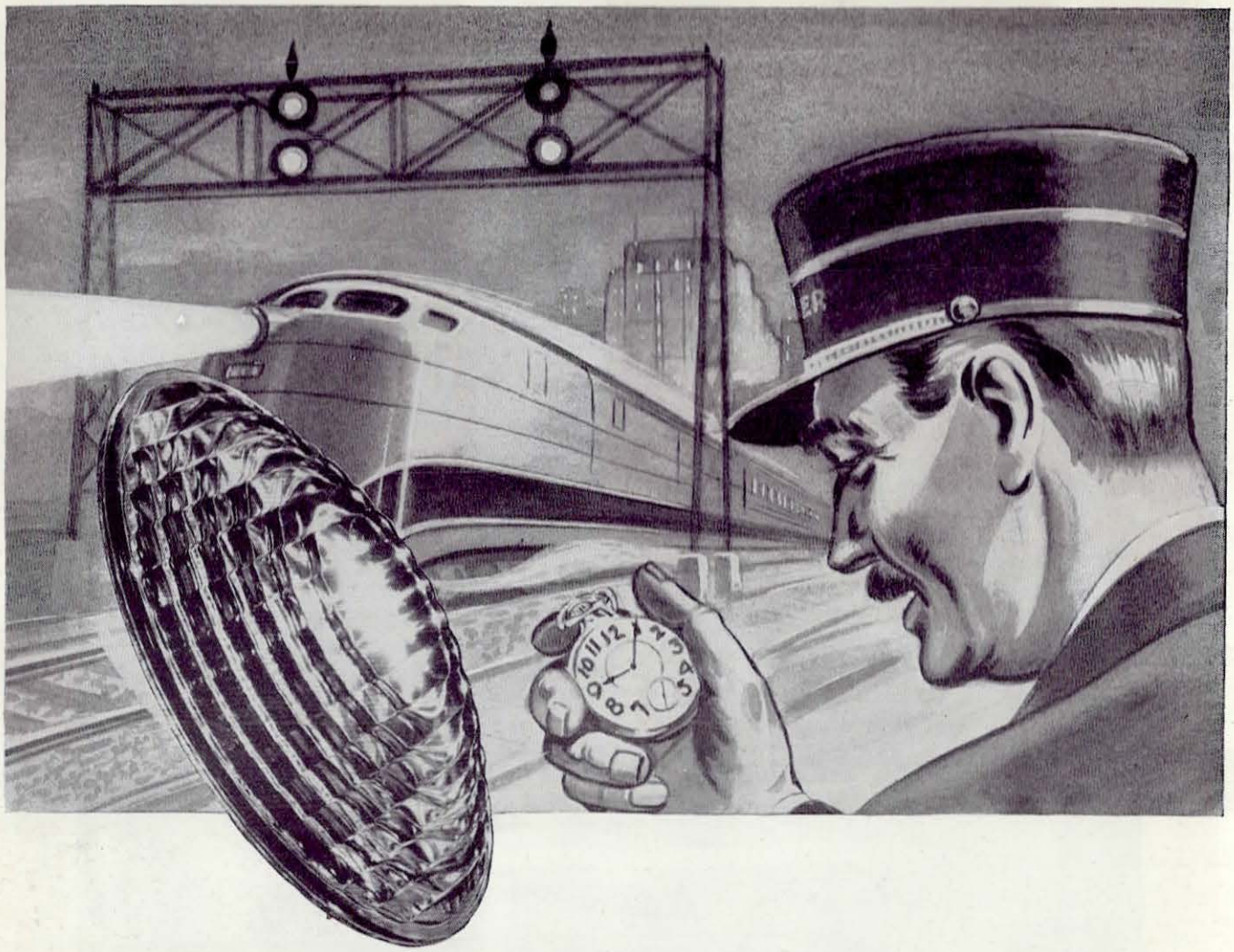


Photo Courtesy of Pullman-Standard Car Mfg. Co.

SUPERLATIVE appointments distinguish the lounge cars of the Rock Island Rockets, and especially noteworthy are the gleaming, modernistic bars built by Colonna for these popular trains. Like Colonna dining car kitchen equipment, Colonna service bars are helping to build good will on many of America's finer trains.

ANGELO COLONNA
PHILADELPHIA, PA.



SIGNALWARE THAT IS *Dependable*

. . . IS THE LEAST COSTLY

WHEN safety is at stake there is no point in compromising on the quality of your signal glassware. Signalware that is less than dependable is too costly.

Design and glass research in the Corning Laboratories plays an important part in continually improving the Safety of American Railroads. As in the past, Corning, today, is cooperating with AAR Signal Section Committees in establishing standards which assure maximum efficiency and year around safety.

That is why Corning is never satisfied with anything less than top quality. That is why Corning products are the least costly in the long run. That is why all manufacturers of lamps, lanterns and signals, supply Corning Railroad Glassware.

Safety depends on signal glassware—Railroads depend on Corning.

CORNING means research in GLASS

T.M. REG. PYREX U.S.PAT.OFF.

Corning, Macbeth, Pyrex, CNX are registered trade-marks of Corning Glass Works

CORNING GLASS WORKS • CORNING, N. Y.

SALES OFFICES: NEW YORK • CHICAGO • SAN FRANCISCO

RAILROAD GLASSWARE

TECHNICAL PRODUCTS DIVISION: SIGNALWARE • GLASS PIPE • GAUGE GLASSES • LIGHTINGWARE
LABORATORY GLASSWARE • OPTICAL GLASS • GLASS COMPONENTS

Industry is on the Move .... Westward

UNION PACIFIC RAILROAD COMPANY
OMAHA 2, NEBRASKA

G. F. ASHBY, PRESIDENT

To American Industry:

The Union Pacific West offers industry proximity to products of ranch, mine and forest...ample power, fuel, water...healthful living conditions in scenic, recreational regions...and native-born, high-type labor.

Our faith in the future of this vast territory is confirmed by our current 200-million-dollar investment program for new equipment, improved and expanded facilities to provide shippers and travelers with the utmost in rail transportation.

We are at <u>your</u> service.

Yours very truly,

G F Ashby

President,
Union Pacific Railroad

George F. Ashby

** One of a series of advertisements based on industrial opportunities in the states served by Union Pacific Railroad.*

Unite with Union Pacific in selecting sites and seeking new markets in California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, Oregon, Utah, Washington, Wyoming.

*Address Industrial Department, Union Pacific Railroad
Omaha 2, Nebraska

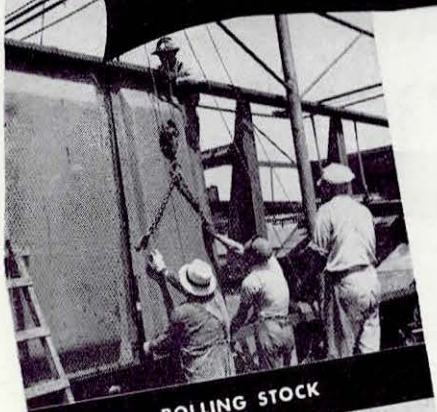
UNION PACIFIC RAILROAD

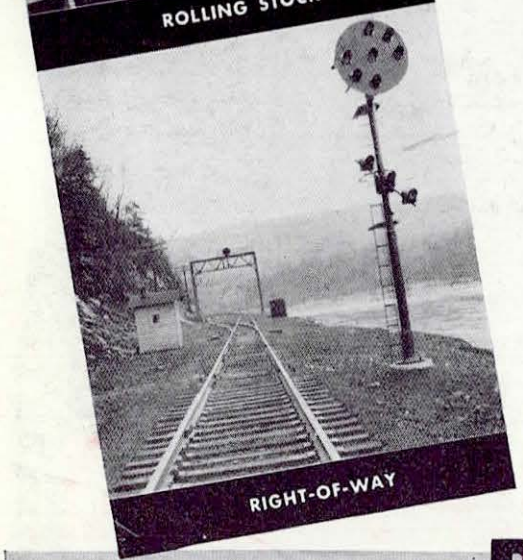
Road of the Daily Streamliners

make extra NET PROFITS *out of rust losses!*

RUST-OLEUM STOPS RUST

APPLY BY BRUSH, DIP OR SPRAY


ROLLING STOCK


RIGHT-OF-WAY

You Save on Maintenance Costs!

Keep cars rolling years longer . . . Provide essential protection to right-of-way equipment, bridges, buildings and other properties. Rust-Oleum coats metal . . . and dries firm—with a tough, *water-tight,* enduring film that prevents rust by moisture, fumes, acids, heat and many other destructive elements.

Rust-Oleum can be applied directly to any rusting surface—after easy, time-saving preparation. *It outlasts ordinary materials two to ten times,* depending on conditions. For lasting satisfaction and extra profits specify Rust-Oleum on new and re-built cars . . . and out on the right-of-way where rust is costly.

Write for full information TODAY. Ask for Catalog No. 145.

HERE'S HOW RUST-OLEUM SAVES TIME AND MONEY:

IT GOES ON FASTER
Rust-Oleum saves 25% of the time normally required for application . . . and covers up to 30% more area.

IT CUTS PREPARATION
No sandlasting, flame cleaning or chemical rust "dissolvers" are required. Merely wirebrush to remove scale, dirt, etc. and apply RUST-OLEUM.

IT PROTECTS LONGER
Rust-Oleum LASTS two to ten times longer than ordinary materials on most jobs. Every application gives maximum protection.

RUST-OLEUM CORPORATION
2415 OAKTON STREET EVANSTON, ILLINOIS

NAILABLE STEEL FLOORING*

Keeps Gondolas Off the Rip Tracks— Out of the Shops

NAILABLE STEEL FLOORING helps keep gondolas off the Bad Order Report, saves you money in floor repair and replacement costs. Check these points that show *why* NAILABLE STEEL FLOORING cuts floor maintenance costs and keeps cars where they belong—on the line, bringing in revenue.

Greater Strength—Channel design gives NAILABLE STEEL FLOORING higher strength, more resistance to dishing than steel plate floors. After months of grinding impacts from magnets, hot pig iron and the clamshell shown, the NAILABLE STEEL FLOOR in a test car retained its over-all flatness and nailability, its suitability for blocked and skidded loads.

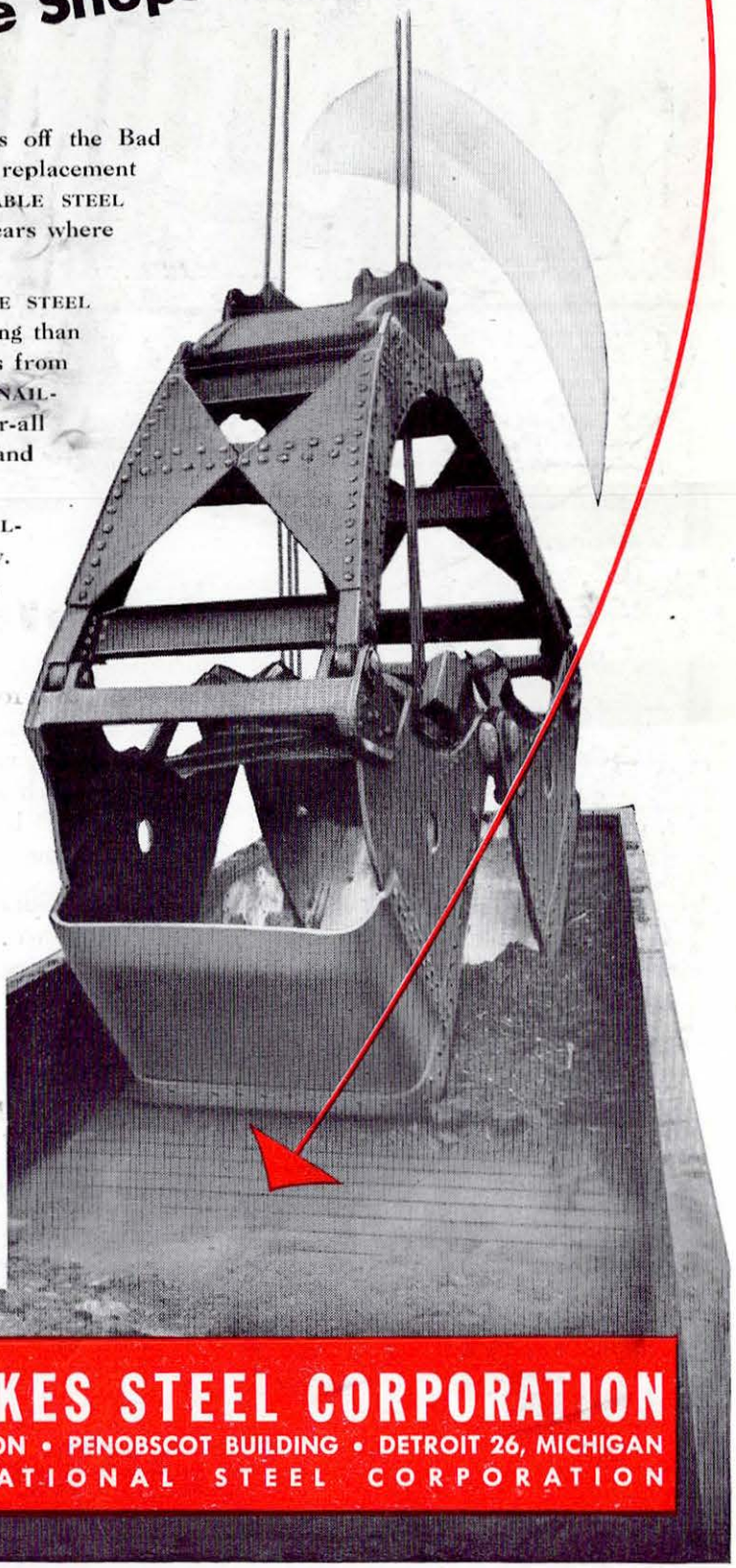
No Nail Damage—Nails can't rip or splinter NAILABLE STEEL FLOORING, can't damage it in *any* way. Held tighter than in wood, the proper size nails (20d or 30d in gondolas) are easily driven into the nailing grooves and can be readily removed.

High Rust Resistance—NAILABLE STEEL FLOORING is safer from rust because it's made from N-A-X HIGH-TENSILE steel which has three to five times the corrosion resistance of plain carbon steel and more than twice that of copper-bearing steel.

Combining nailability and strength, NAILABLE STEEL FLOORING does the job of both wood and conventional steel plate floors—and does each of them better. It saves money in operating as well as maintenance costs. When your next new car or rebuilding program comes up specify NAILABLE STEEL FLOORING.

NO TORN UP PLATES. This photograph shows gondola service at its roughest. Big clamshells like this ten-ton giant often tear rivet heads out of steel plate floors and rip up the cover plates. NAILABLE STEEL FLOORING *cannot* be torn up because it has no projecting rivet heads, no plate edges.

*PATENTS PENDING



NAILABLE STEEL FLOORING

A GREAT LAKES STEEL PRODUCT

GREAT LAKES STEEL CORPORATION

STEEL FLOOR DIVISION • PENOBSCOT BUILDING • DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

bringing battery inspection

OUT IN THE OPEN

easy to roll out

One tug at the new EDISON-developed roll-out battery cradle and much of your former battery servicing trouble rolls away! The cradle, gliding on ball-bearing wheels along hinged extension tracks, brings the entire battery "out from under" as a unit — completely accessible for rapid and positive inspection. watering, cleaning.

Besides improved servicing, these advantages are realized:

Better ventilation: battery is suspended above the compartment floor.

Cleaner compartments: easy to remove dust and dirt during servicing.

Quicker shopping: entire cradle removable by crane or fork truck.

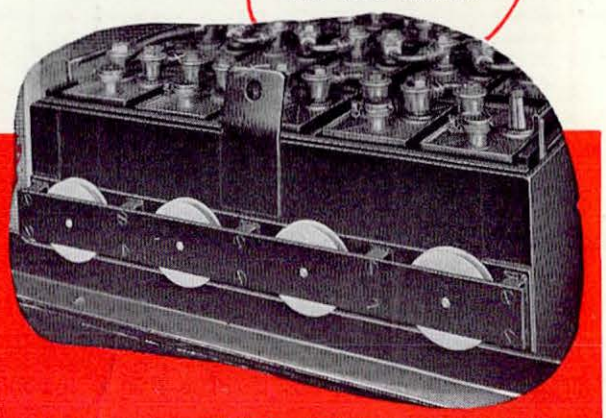
Shorter jumpers: reduced cable footage and maintenance, less voltage drop.

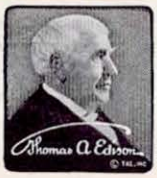
No conflicts: roll-out compartment also accepts conventional assemblies.

No limits: cradle will handle bulkiest assembly now held by customary box.

Don't overlook this new way to cut maintenance costs. Let us assist you in adapting roll-out cradles to existing or proposed compartments. Complete information and typical layouts furnished on request by any of our district offices.

the wheels do the work





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EDISON STORAGE BATTERY DIVISION OF THOMAS A. EDISON, INCORPORATED, WEST ORANGE, N. J.

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Another long-term service record for durable Johns-Manville Asbestos White Top Roofing

THIS ROOF has an area of 800,000 square feet. A recent inspection revealed that the Johns-Manville materials used are in excellent condition and good for many more years of service.

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This J-M asbestos ready-to-lay roofing was designed especially to provide long-term, low-cost service on pitched roofs. Other Johns-Manville quality roofings — both ready-to-lay and built-up — are available for a wide range of requirements on railroad buildings. For full information, write Johns-Manville, Box 290, New York 16, N. Y.

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Johns-Manville **90 YEARS OF SERVICE TO TRANSPORTATION**

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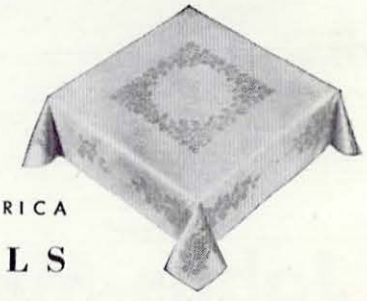

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—say shop superintendents

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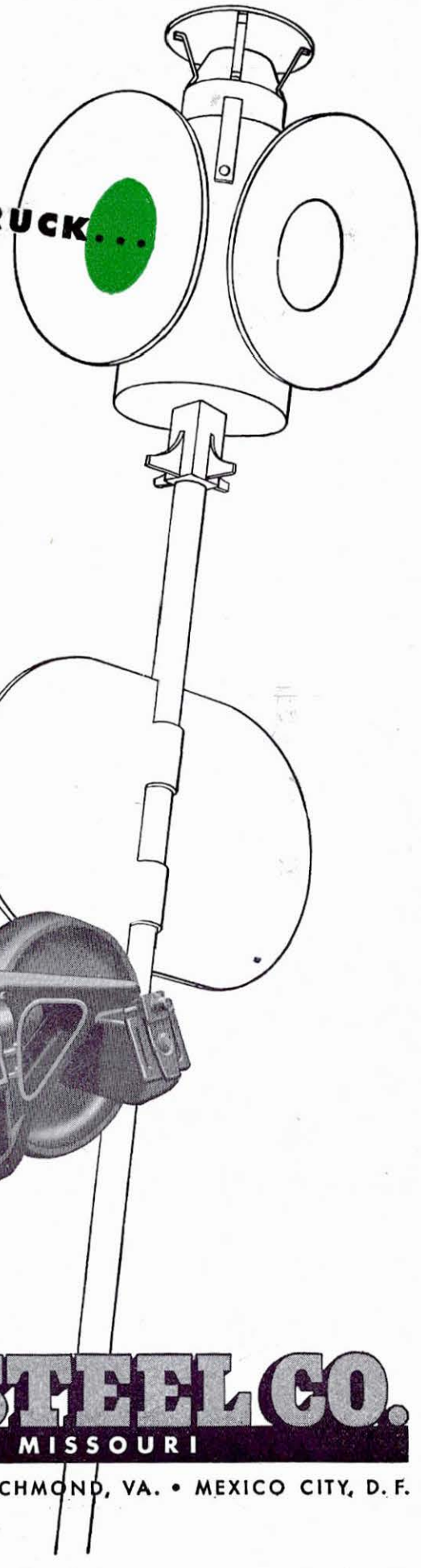
CUSHIONED MOTION



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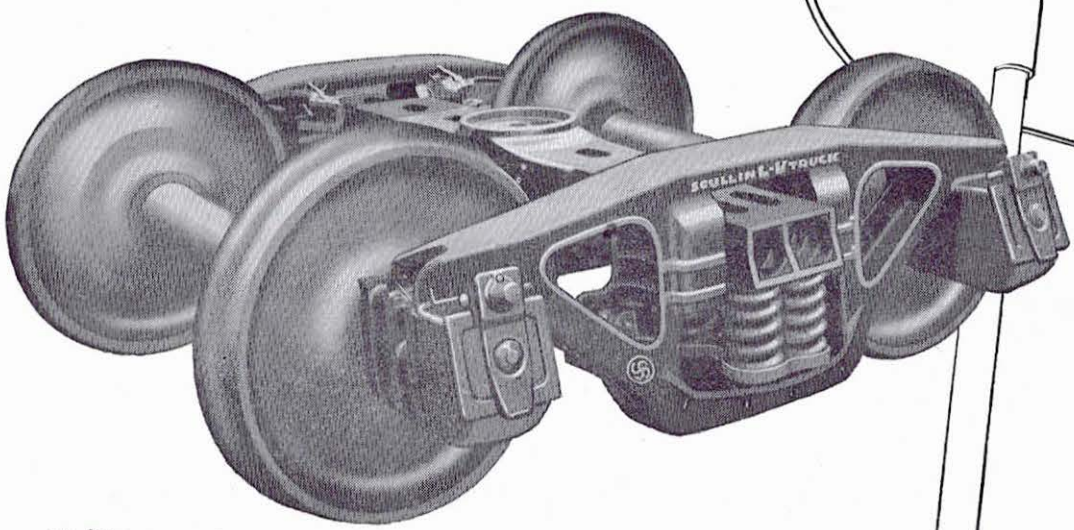

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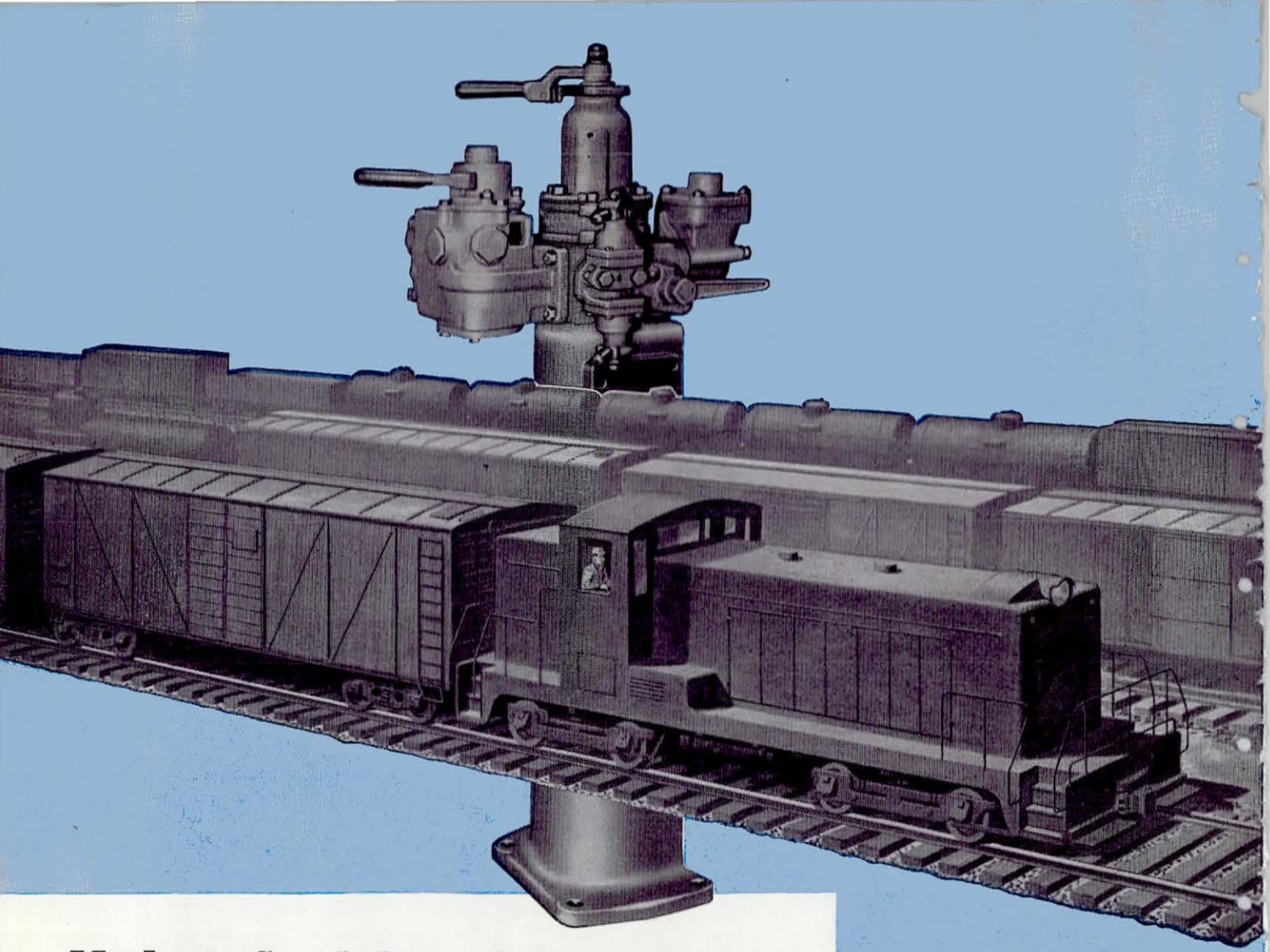

Modern flexibility of movement calls for modern flexibility of braking

To get the most from your Diesel Switchers—match their flexibility of *movement* with equal flexibility in braking.

Westinghouse Type 6-DS equipment is designed specifically for Diesel Switchers, incorporates operating principles and advanced features that help to increase their mobility.

Here, as in every division of transportation, Westinghouse Air Brake Equipment is geared to today's needs for efficient, dependable brakes.

Brakes are Basic to Railroad Progress

Westinghouse Air Brake Co.

WILMERDING, PA.

Vol. 124, No. 18 May 1, 1948

RAILWAY AGE

With which are incorporated the Railway Review, the Railway Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office.

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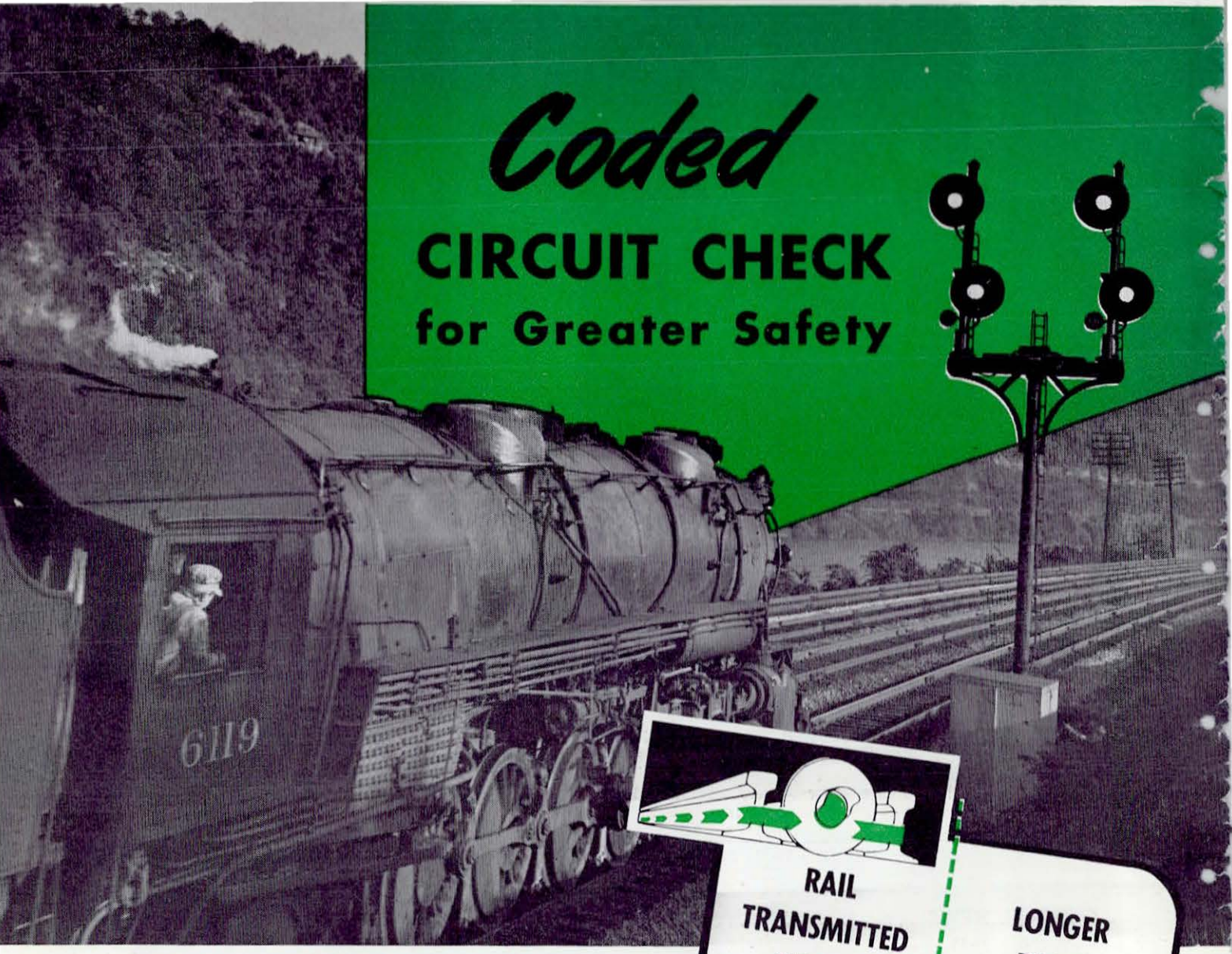

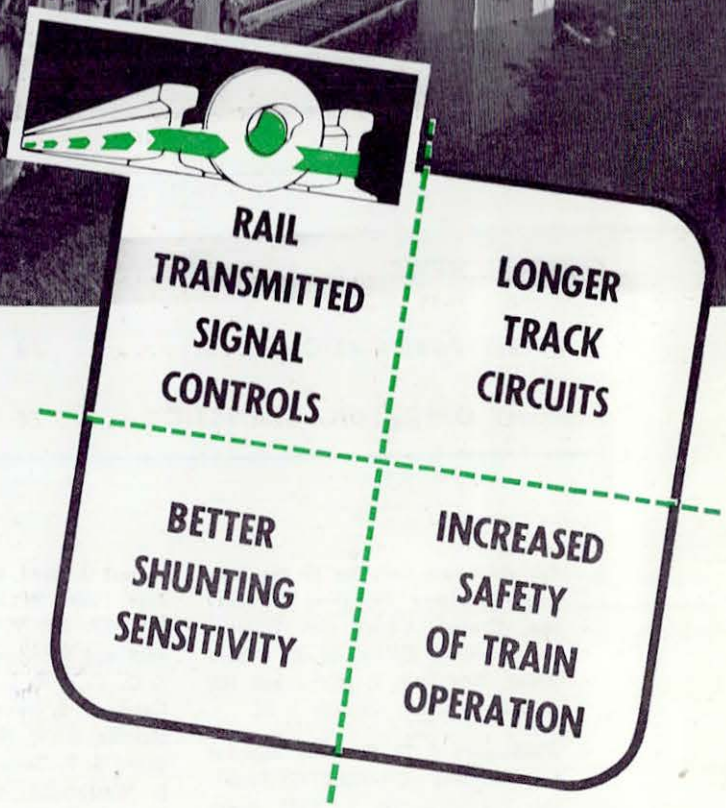

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UNION SWITCH & SIGNAL COMPANY

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NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

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MODERN LAKE PORT TRANSFER

To afford major benefits to the coal and ore industries, through better service, and to realize other important corollary advantages to themselves, the New York Central and Baltimore & Ohio, through a subsidiary, have jointly constructed a modern coal and ore-handling facility at the mouth of the Maumee river on Lake Erie, at Toledo, Ohio, at a cost of $18,500,000. This new joint terminal, the major portion of which went into operation at the opening of the lake navigation season this spring, but which will not have its formal opening until June 2, replaces separate facilities each railroad has heretofore operated several miles up the Maumee river, in the heart of the city.

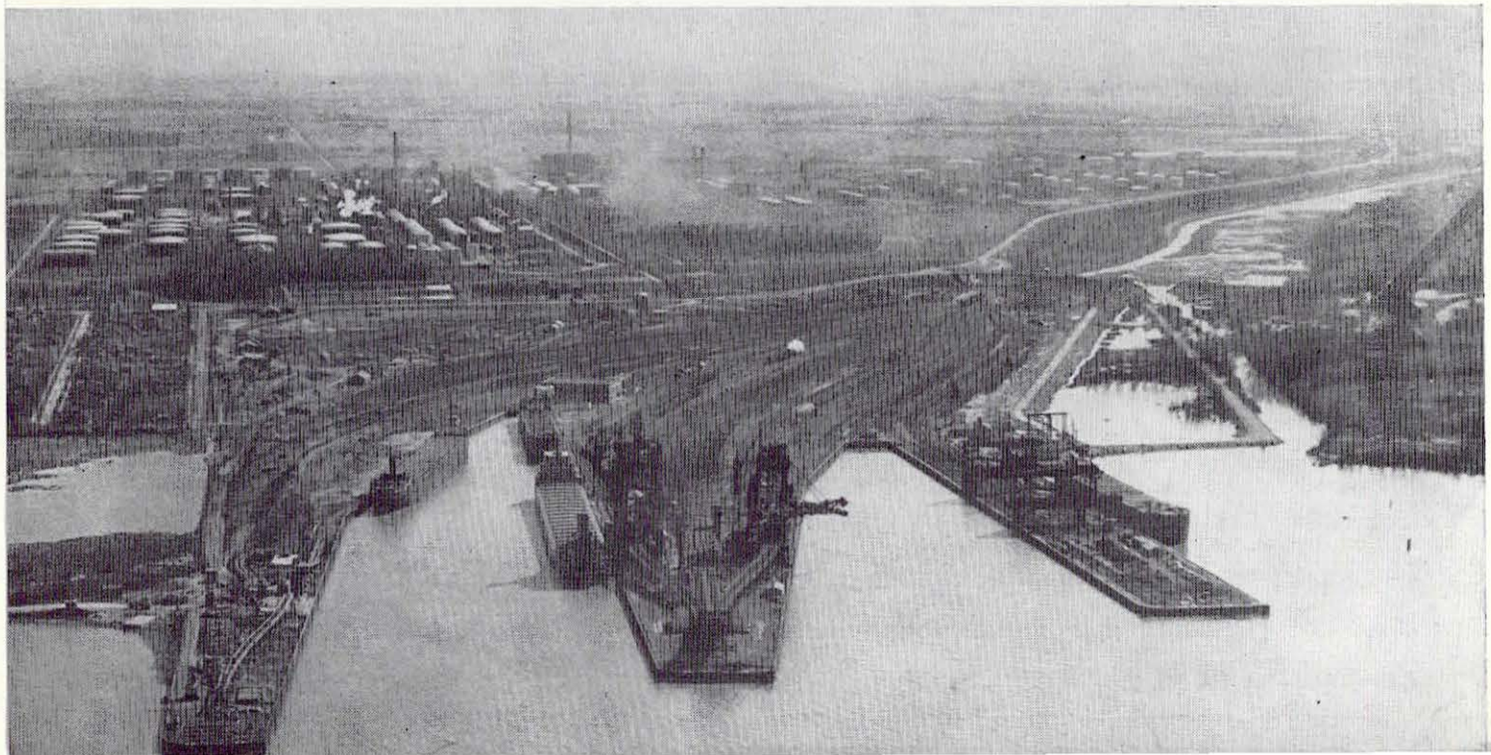
At the old locations, the capacities of the plants, although entirely adequate, could seldom be realized because of the delays to lake vessels ensuing from the tedious sail through five to seven drawbridges and often against a strong current. The consolidation of the facilities of both roads on the lake front overcomes this serious disadvantage and will permit coal and ore vessels to make more round trips per year, thereby increasing the effective capacity of the port. This, in turn, will result in increased revenues to all concerned.

The improvement, when completed, will include three electric coal-car dumpers, two electric ore-loading machines, supporting yards having a total capacity of 5,400 cars, and other auxiliary facilities. At the present time, one of the coal dumpers is under construction, but, as a whole, the new terminal is designed to permit the loading and unloading of cars and boats fast enough to handle 20,000,000 tons of coal and 4,500,000 tons of ore a year.

To construct and operate this new facility, a new jointly-owned subsidiary of the New York Central and the Baltimore & Ohio was incorporated in Ohio, August 25, 1945, as the Lakefront Dock & Railroad Terminal Co. On February 21, 1946, the Interstate Commerce Commission authorized: (1) the construction of the terminal facilities; (2) the New York Central and Baltimore & Ohio to acquire joint control of the new company and trackage rights over its property; and (3) modification of existing trackage agreements which each railroad had with the Toledo Terminal so they could reach the new facility.

The new Dock & Railroad property, involving 212 acres, extends from a connection with the Toledo Terminal near Ironville (Millard ave.) to the new slips located on Maumee bay at Harbor View. Most of the new site was previously little more than a swamp, through which a small stream—Otter creek—

Air view of the new Lakefront Dock & Railroad Terminal coal and ore-handling facilities at Toledo, Ohio. Note two ore unloaders on pier to the right; two coal dumpers on pier in center; third dumper is being erected on pier at the left



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Fast interchange and classification; prompt service to the railroads and industries of Greater St. Louis are facilitated by Fairbanks-Morse 1000 h.p. locomotives. Here, the "701" and "700" are shown on the job at the Bremen Avenue yards, which, with other T.R.R.A. properties, make up 2800 acres and 368 miles of track — classifying approximately 6000 freight cars and 1600 passenger cars per day.

When it comes to locomotives...

Soon there will be two more Fairbanks-Morse 1000 h.p. locomotives working 'round the clock with the others already serving the Terminal Railroad Association in St. Louis.

Here, in the world's largest system of unified railroad freight and passenger terminals, Fairbanks-Morse locomotives have thoroughly proved themselves to all operating personnel as well as to management . . .

The great Opposed-Piston engine which requires minimum servicing . . . the exclusive "soft-start" feature . . . the smooth, vibration-free performance . . . these are some of their points of preference for Fairbanks-Morse road equipment. Fairbanks, Morse & Co., Chicago 5, Illinois.

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MODERN METHODS FOR DEALING WITH UNION RELATIONS

Railroad managements are confronted with the difficult—the faint-hearted might say impossible—task (1) of retaining the interest and loyalty of organized railway employees and (2) of resisting the efforts of their organizations to fasten upon the railroads wages and conditions of labor which would preclude all hope of profitable operation—that is, which would condemn the industry to socialization. The growth of the labor organizations in political and economic power has rendered obsolete the methods which, less than a generation ago, would have succeeded in overcoming this difficulty. The fact that those methods would not have a Chinaman's chance of success today does not demonstrate—as some have pessimistically concluded—that there are no longer any means available of dealing effectively with such a situation.

Past Procedures

What were the old methods of grappling with this perennial problem, which observation and experience indicate will no longer produce results? There used to be a body of legal precedent and a Constitution, rigorously defended by the courts, which placed limits upon the power of associations of employees to impose their will upon an employer. Similarly, these legal and Constitutional safeguards gave some power to an employer of effective resistance to union demands which the employer considered unreasonable. Under such a regime as this, the employer could usually depend upon his legal staff to protect him from gross injustice. That is to say, if the employer's position was a reasonable one, he could get a large measure of protection by winning to his point of view a small number of highly intelligent and highly skilled men—viz., the courts. It was not necessary to go to the trouble and expense of trying to explain these complex problems to the general public, which is inexpert and, usually, only mildly interested in such matters. It was not even necessary to go to any great length in explaining the employer's position to the employees themselves.

If the courts could not provide the necessary protection for a defensible position on the part of the employer in dealing with his problem of union relations, then there was at least some hope of securing a moderate degree of assistance from competent legislators—in the day before "direct democracy" became the rule. When people voted as independent citizens, rather than as members of pressure groups, the legislator's job was considered to be one of *representing* his constituents—not merely that of voting blindly on all questions the way the numerically most powerful groups in his constituency instruct him. However, with the development of pressure groups based upon brute

numbers, the man with a just cause can no longer rely upon directing his pleas to the intelligence of legislators—he has to carry his case to the legislator's constituents, to persuade *them* to allow their representative to exercise his judgment and to give rein to his conscience.

What has happened is that *questions which used to be settled in the law courts or in legislative chambers now have to be carried to the "court of public opinion."* The function of competent legal and legislative counsel is as indispensable as ever —but it is no longer sufficient, by itself, to secure the necessary results. The foregoing observations are so obvious that it would be an affront to mention them, except for the fact that the railroads have not yet indicated by a thoroughgoing revision of their strategy that they fully appreciate the changes which have occurred.

The joint advertising undertaken last year by the regional railroad associations—to acquaint the public, and railroad employees themselves, of the grave dangers to the industry, to employees, and to the national welfare in the unions' train-limit and excess-crew demands—was certainly as effective an educational job as the railroads ever did. But it was like one rifle shot into a flock of crows —two birds were winged and the huntsman went away content with his day's bag, while the rest of the crows returned undismayed to their attack on the corn crop.

The Latest Challenge

Does the public—or do railroad employees—have any notion of the disaster which would overtake the railroads and the country if railroading at nights and on Saturdays, Sundays and holidays were to be made a completely penalty-overtime operation? There has been plausibly deceptive union advertising arguing the sweet reasonableness of saddling the railroads with this burden in order to enable the railroader to attend church on Sunday with his family—as pious a piece of window-dressing as was ever used to draw attention away from a host of real merchandise of, perhaps, less attractive quality. The challenge of this appeal to sentimentality ought to be met with the hard facts of public discomfort, expense and disruption of economic life which would be occasioned if the railroads were forced, largely, to close up shop after dark and on week-ends.

There is no use of getting discouraged at the magnitude of the task of educating employees and the public in how their welfare is involved in the preservation of the minimum essentials necessary to enable the railroads to function as self-supporting enterprise. The job is, no doubt, immense—but the penalty for failure is too painful even to contemplate. A look at what is happening to people in Eastern Europe should be enough to call forth all the effort necessary to retain conditions permitting the successful functioning of free institutions.

Managements of industry, including the railroads, are called upon, not just to save their own skins, but to save practically everything else that makes life worth living for all their fellow-citizens. They cannot choose the methods with which they might prefer to do this job—and which, not long ago, were available to them. Instead, they have to use as effectively as they are able those methods that still lie within reach. Experience which others have had with these methods gives no reason for fear that they will not produce the desired results, if used intelligently and not "too little and too late."

FIGHTING TRACK WEEDS TO A STANDSTILL

To uninformed observers, including many railroad officers, a weedy track is nothing much more serious than track which is dirty and carelessly kept. But to the track-maintenance officer, and in some cases to the operating officer, it is a source of endless annoyance, expense and hazard, especially where the growth is hearty and abundant. In some parts of the South, unless vegetation were controlled, nature would take over completely in a year or two.

Under any conditions, weedy track is costly to maintain. Weed roots foul the ballast and interfere with drainage, while the aerial bodies of the plants make work on the track difficult or impossible, with largely increased labor cost. At the same time, where weeds are inadequately controlled, motor-car and train operation becomes difficult, and the hazards of personal injury to those who must necessarily move about the tracks, and of fires destroying adjacent property and rolling stock, are greatly increased.

Over the years the railroads have fought this condition by a wide range of means, including hand scuffle hoes, burners, scalders, mowers, scarifiers and chemicals—always at a sizable out-of-pocket expense which has cut into their maintenance-of-way budgets for constructive work. But, because of its "unproductive" appearance, there has always been resistance to expenditure for weed destruction beyond that which is absolutely necessary, and control is often limited to keeping the growth to a height that will not interfere with routine track work or train operation. This has been true particularly in yards and on

passing tracks, as well as on many branch and secondary lines.

Fighting weeds has been widely accepted as a perennial nuisance—but new developments, especially in chemicals, indicate that this view is no longer necessary. The practicability of a complete kill of nearly all of the grasses and weeds, including Bermuda grass, that infest the tracks has been demonstrated.

A complete kill by any method, unfortunately, costs more than a partial kill, but, for the first time, it now appears that such a degree of destruction is possible, with many advantages and ultimate lower cost. Accordingly, the problem today becomes one of figuring what initial cost per mile can be justified to secure this practically complete degree of kill. In at least some areas, it will doubtless be found that there are overwhelming advantages, both practical and economic, in fighting nature to a standstill with the most effective weapons yet developed—and almost regardless of the first cost.

FUELS AND RAILWAY MOTIVE POWER

Three points of importance with respect to the future use of petroleum as the source of fuel for the conduct of railway transportation were brought out before the New York Railroad Club at its April meeting by Dr. W. J. Sweeney, vice-president of the Standard Oil Development Company, whose paper is abstracted elsewhere in this issue. One of these is the tremendous increase, percentage-wise, during the past nine years in the consumption of Diesel fuels and other distillates, which include fuel for space heating. The use of Diesel fuel increased 250 per cent and other distillates 130 per cent from 1938 to 1947, while the total consumption of petroleum products increased 75 per cent. Kerosene, residual oils, and other petroleum products increased 80 per cent, while gasoline increased but 60 per cent.

Further weight to the tremendous rate of increase in the use of the distillates and their effect on the growing competition between the various fractions of the barrel of crude petroleum was given in the discussion of the national defense aspects of the situation by questions asked by Brig. Gen. P. F. Yount and Dr. Sweeney's answers. This exchange brought out the fact that, in a national emergency, should one occur in the near future, the rate of petroleum consumption would be stepped up from the 1947 daily average of 5.4 million barrels to 8 million barrels, with demands for new types of fuel which would compete directly with gasoline and distillates for a portion of their fractions of the crude.

The second point is of immediate concern. It is the possibility, now being explored by the petroleum industry, that modifications in Diesel-fuel specifications may be practicable which will increase the proportion of Diesel fuel recoverable from the crude. If these modifications prove practicable, they may alleviate the present tightness which is likely to continue for several years.

The third point, as it was brought out in the discussion of Dr. Sweeney's paper, is that the complete Dieselization of railway service now performed by oil-burning steam locomotives would, on net balance, release a large quantity of petroleum in the form of residual fuel. This, one estimate indicates, would more than offset the quantity of Diesel fuel required to complete the Dieselization of the railroads by the replacement of coal-burning steam motive power. Whether this will prove to be exactly true, should the railroads be completely Dieselized, is a matter of doubt. Other estimates do not indicate a surplus as the end result. Whether surplus or excess is indicated, the difference is small.

Several aspects of the situation with respect to coal as railway fuel were dealt with at the same meeting by Earl C. Payne, consulting engineer, Pittsburgh Consolidation Coal Company. Mr. Payne's presentation will appear in a later issue. Without anticipating it, however, the prospective demands for liquid fuels, should a national emergency occur, seem to be such, in relation to known reserves and processing facilities, as to suggest the need for the retention of a substantial supply of steam motive power and the facilities for dealing with it.

WHY THE RUSH?

We apparently are moving forward to a day when we will be hard put to find any public conveyance capable of taking us places at anything less than breakneck speed. It is a prospect that one must greet with mixed feelings of wonderment and misgiving.

After all, there is something to be said for leisurely travel. Why the rush? Why this constant effort to step up the pace? How often does a man leave one spot and fly through the sky to another only to loll around, kill time or do practically nothing after he arrives? To what end? Why are we hurrying so much? Where are we going, and what do we propose to do when we get there? The internal combustion machine, jet propulsion, rockets, the atomic engine—these actual and potential things are opening the way to speeds that can make our whole race dizzy at a time when its chief need seems to be to sit still long enough to catch its breath and try figuring out a few of its problems. Instead of putting on the brakes, why does it strive after an ever-swifter mobility? Is it just restless? Or could it be seeking to run away from itself?

—The Washington (D. C.) Star

MODERN LAKE PORT TRANSFER

To afford major benefits to the coal and ore industries, through better service, and to realize other important corollary advantages to themselves, the New York Central and Baltimore & Ohio, through a subsidiary, have jointly constructed a modern coal and ore-handling facility at the mouth of the Maumee river on Lake Erie, at Toledo, Ohio, at a cost of $18,500,000. This new joint terminal, the major portion of which went into operation at the opening of the lake navigation season this spring, but which will not have its formal opening until June 2, replaces separate facilities each railroad has heretofore operated several miles up the Maumee river, in the heart of the city.

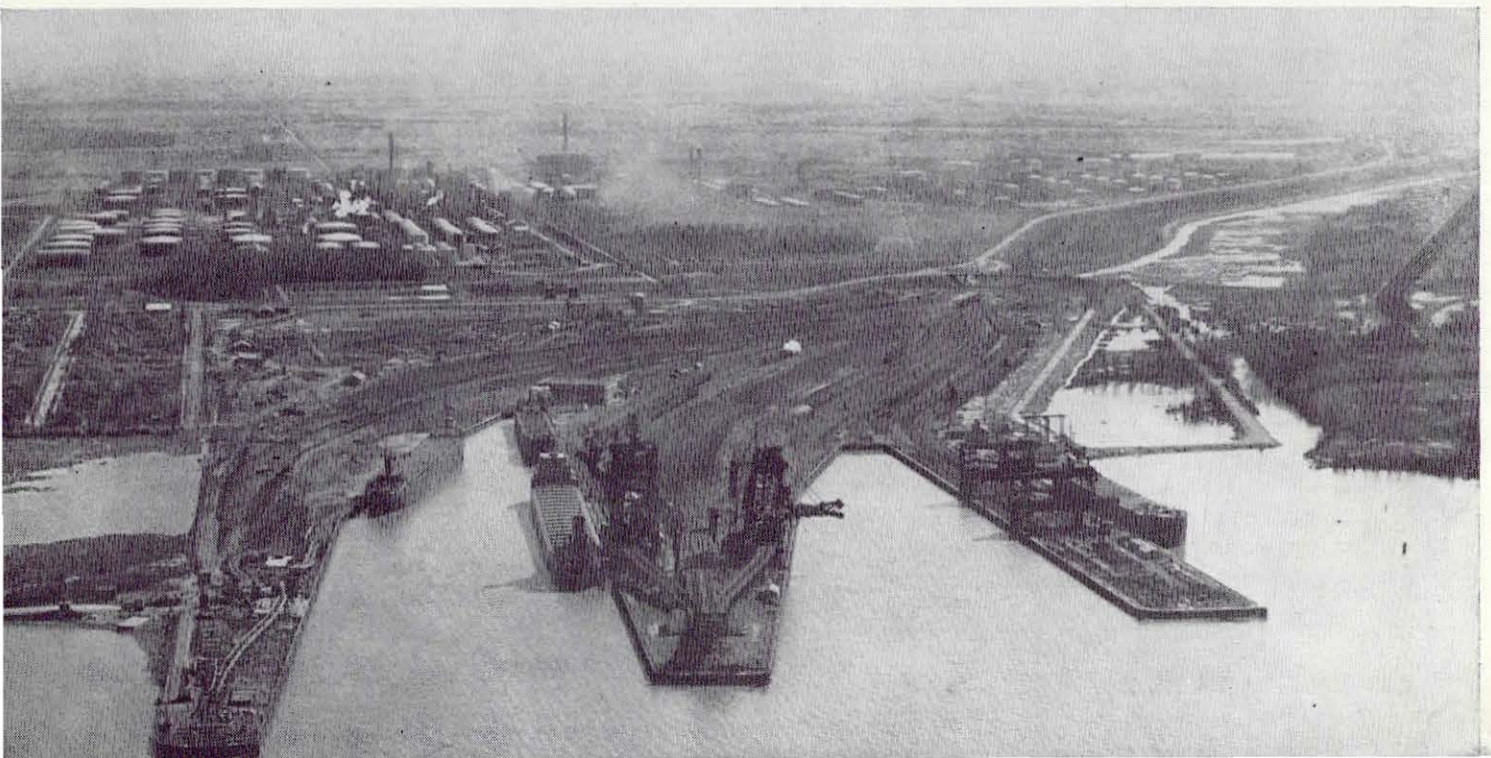
At the old locations, the capacities of the plants, although entirely adequate, could seldom be realized because of the delays to lake vessels ensuing from the tedious sail through five to seven drawbridges and often against a strong current. The consolidation of the facilities of both roads on the lake front overcomes this serious disadvantage and will permit coal and ore vessels to make more round trips per year, thereby increasing the effective capacity of the port. This, in turn, will result in increased revenues to all concerned.

The improvement, when completed, will include three electric coal-car dumpers, two electric ore-loading machines, supporting yards having a total capacity of 5,400 cars, and other auxiliary facilities. At the present time, one of the coal dumpers is under construction, but, as a whole, the new terminal is designed to permit the loading and unloading of cars and boats fast enough to handle 20,000,000 tons of coal and 4,500,000 tons of ore a year.

To construct and operate this new facility, a new jointly-owned subsidiary of the New York Central and the Baltimore & Ohio was incorporated in Ohio, August 25, 1945, as the Lakefront Dock & Railroad Terminal Co. On February 21, 1946, the Interstate Commerce Commission authorized: (1) the construction of the terminal facilities; (2) the New York Central and Baltimore & Ohio to acquire joint control of the new company and trackage rights over its property; and (3) modification of existing trackage agreements which each railroad had with the Toledo Terminal so they could reach the new facility.

The new Dock & Railroad property, involving 212 acres, extends from a connection with the Toledo Terminal near Ironville (Millard ave.) to the new slips located on Maumee bay at Harbor View. Most of the new site was previously little more than a swamp, through which a small stream—Otter creek—

Air view of the new Lakefront Dock & Railroad Terminal coal and ore-handling facilities at Toledo, Ohio. Note two ore unloaders on pier to the right; two coal dumpers on pier in center; third dumper is being erected on pier at the left



FACILITY OPEN FOR BUSINESS AT TOLEDO, OHIO

New plant, built by the Lakefront Dock & Railroad Terminal at a cost of $18,500,000, is designed to handle 20,000,000 tons of coal and 4,500,000 tons of ore annually

meandered. To prepare the site for a large yard, about a million cubic yards of fill had to be placed. This material was hauled from borrow pits in trucks and scrapers and was first dumped on solid ground, following which it was pushed progressively into the swamp by bulldozers, in layers one to two feet thick. This action squeezed the muck ahead of the dozers and deposited solid material in its place. No sheepfoot rollers were used, but the continuous traffic of bulldozers, heavy trucks, large semi-trailers, and scrapers so compacted the fill that little settlement has been observed or is expected. Test holes dug have shown excellently compacted material resting on a firm subgrade.

The placing of the fill also pushed the meandering Otter creek ahead of it to the extreme west side of the property, where a final channel was dug for it.

In plan, the new facility, stretched out over a distance of more that 2½ mi., lies in a general south to north direction, from the entrance and exit end at Millard ave., through a long receiving yard and a series of load and empty yards, to the waterfront ends of three new piers in Maumee bay. Of the three piers, which are generally parallel to each other, the most westerly supports the two ore unloaders, the center carries two of the coal dumpers, and the third will carry the third dumper, now under construction.

More specifically, the layout begins with a 21-track, 3,500-car receiving yard, which ends in a three-track throat leading to a group of six load and empty yards serving the three coal dumpers. Four additional tracks extend along the west side of the receiving yard for storing loaded ore cars. These latter tracks converge at the north end into the throat, which leads to a seven-track ore yard serving the two ore unloaders. Thus, the ore-handling operations are segregated from and lie generally west of the coal-handling operations. A running track extending along the east side of the receiving yard leads directly to a group of engine-handling facilities north of the throat and southeast of the coal storage yards. The terminal facilities end beyond the three piers in what is reported to be the most adequate turning basin on the Great Lakes. This basin, 600 ft. by 2,200 ft., with a depth of 25 ft. below mean low water, is in direct contact with slips serving both sides of the ore pier and center coal-dumper pier, and the west side of the more easterly coal pier—all of the slips having likewise been dredged to a depth of 25 ft. below mean low water.

All three piers were constructed similarly by driving

Broadside view of the center pier, from the east pier, showing the two car dumpers on the center pier and common kick-back trestle

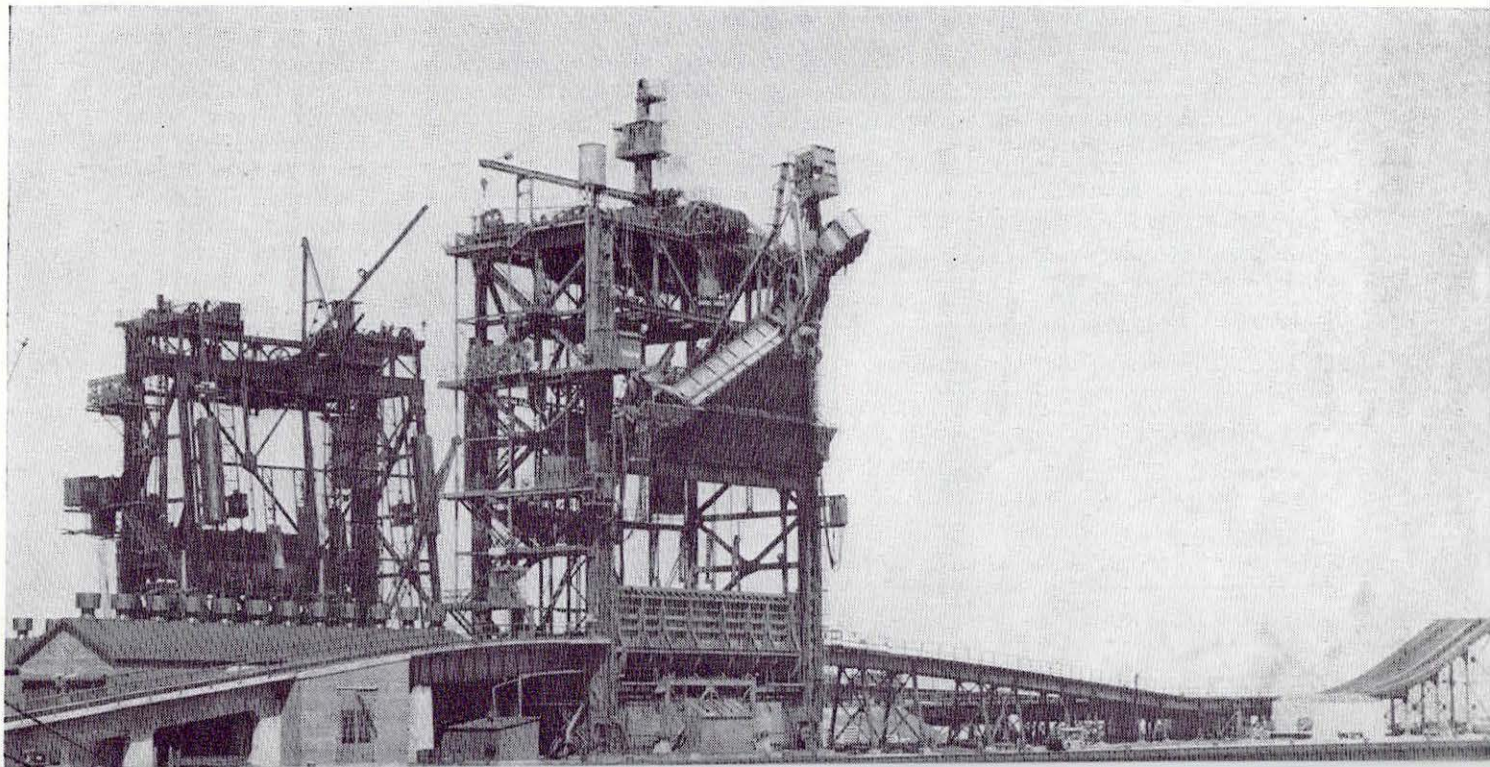


TABLE I—ESTIMATED COSTS	
Total cost	$18,500,000
Car dumpers and ore unloaders (incl. foundations)	4,448,000
Dredging and grading	3,144,000
Track work	2,485,000
Bulkheads and dockwalls	2,479,000
Land	790,000
Miscellaneous facilities	2,863,000

55-ft. interlocked, Z-type sheet piles 19 ft. below the bottom of the slips. The piles extend 11 ft. above the water. Where feasible, the bulkheads thus formed were tied together with three-inch tie rods, equipped with turnbuckles. Where not feasible, as at the ends, and where there is no opposite wall to fasten the rods, the tie rods were fastened into large concrete anchors (deadmen), supported on vertical and battered timber piles. These Z-pile bulkheads were filled on the shore side to form the piers. A total of 6,500 Z-piles were required for all three piers.

Dumpers Operate Independently

The car dumpers are of the elevating, turnover type, and are fully electric in operation. Of the two on the center pier, that on the east side is entirely new, and has capacity for unloading a car a minute. The dumper on the west side of this pier, on the other hand, is one of the dumpers from the former N.Y.C. docks five miles up the Maumee river. This dumper was dismantled, remodeled to modern standards, and transported by flat car and boat to the new docks. As reconstructed, this dumper also has an unloading capacity of a car a minute.

The dumper to be located on the more easterly coal dumper pier, like the rebuilt dumper on the center pier, is being moved from the New York Central's facilities up the Maumee river, and is being completely remodeled and reconditioned before being reinstalled at its new site. This work is now in progress, and every effort is being made to put the machine into operation before the close of the present lake season.

Each of the two dumpers on the center pier has its own independent, six-track loaded-car yard, holding approximately 250 cars. Cars from these yards are moved up to and over the dumpers, from which separate runoff tracks lead to an independent kickback trestle farther to the north. From the trestle, the empty cars are returned on two separate parallel tracks, located midway between the dumpers, to two parallel empty-car yards, each with a capacity of 250 cars. A feature of these two return tracks is that each is equipped with electric car retarders, controlled from an adjacent tower, to regulate the speed of cars being returned to the empty-car yards. From these latter yards, the empty coal cars are pulled out to the south or are moved over into the adjacent ore facilities, as may be required for reloading.

When the third car dumper is completed on the easterly coal-handling pier, it will be afforded independent yard facilities comparable to those serving the dumpers on the center pier, and will have a dumping capacity of one car a minute.

Each of the two dumpers already in service has its own separate set of auxiliary facilities and substation so that each may be operated independently of the other. Among these facilities are storage buildings, in which spare parts, cables, etc., are kept ready for instant use in case of emergency. All foundations for buildings and dumper structures are supported on wood piles 40 to 50 ft. long, the dumper foundation in each case being a massive concrete slab 13 ft. thick.

TABLE II—SUMMARY OF CAPACITIES, SPECIAL WORK AND CONSTRUCTION QUANTITIES		
Capacity	coal	20,000,000 tons
"	ore	4,500,000 tons
Yard	track	56 mi.
"	switches	222
"	capacity	5,400 cars
Maneuvering basin	length	2,200 ft.
	width	600 ft.
Dredging		2,500,000 cu. yd.
Fill		1,750,000 cu. yd.
Steel		23,000 tons
Concrete		30,000 cu. yd.
Steel Z sheet piles		6,500
Wood piles (40 to 50 ft.)		10,000
Slips	depth	25 ft.
Winter storage	mooring capacity	21 boats
Highway relocated		4,300 ft.
Bridges built		3
Cinder ballast		8,000 cars
Other material		6,000 cars

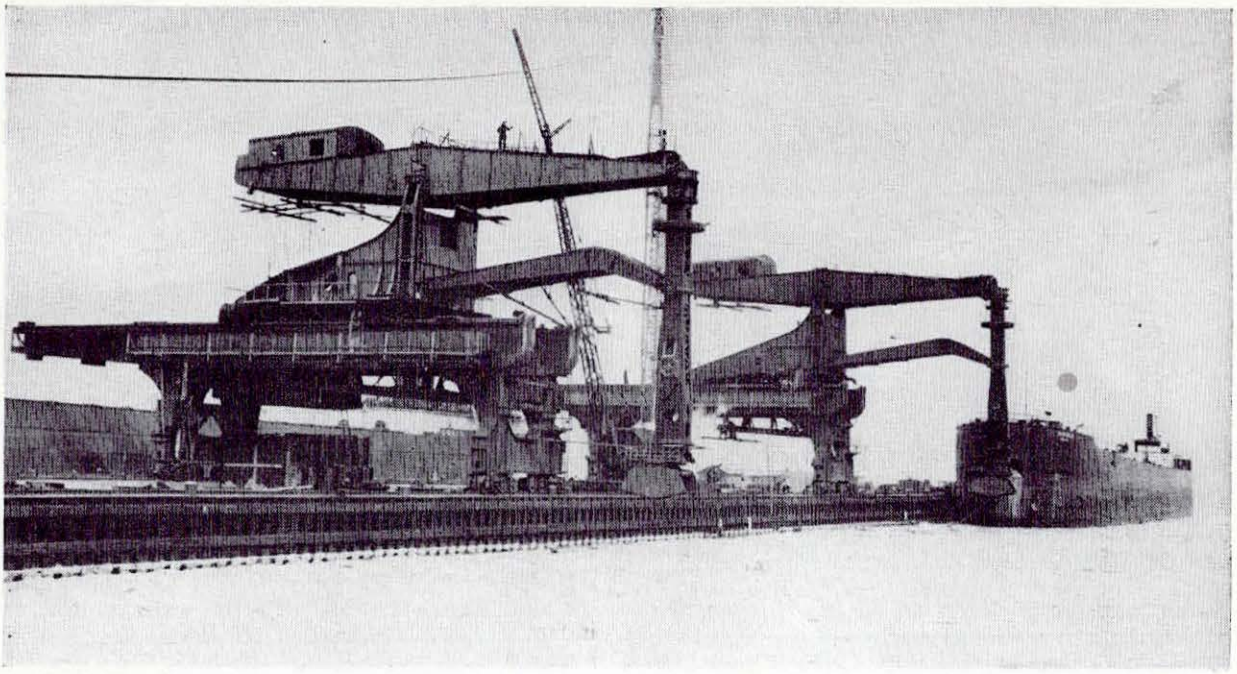
Dumping the Coal

In each of the six-track loaded-coal car yards the cars, in strings, are pushed forward by one of three 30-ton electric pushers operating on narrow-gage tracks located between alternate pairs of load tracks. At the dock end of each yard, pushing of the cars is transferred to either of two additional electric pushers operating on other narrow-gage tracks located directly alongside the ladders. These latter pushers, in each instance, move the cars to an inert car retarder located immediately in advance of the ramp leading to each car dumper. Altogether, five pushers, one on each track, will be operated in each load yard.

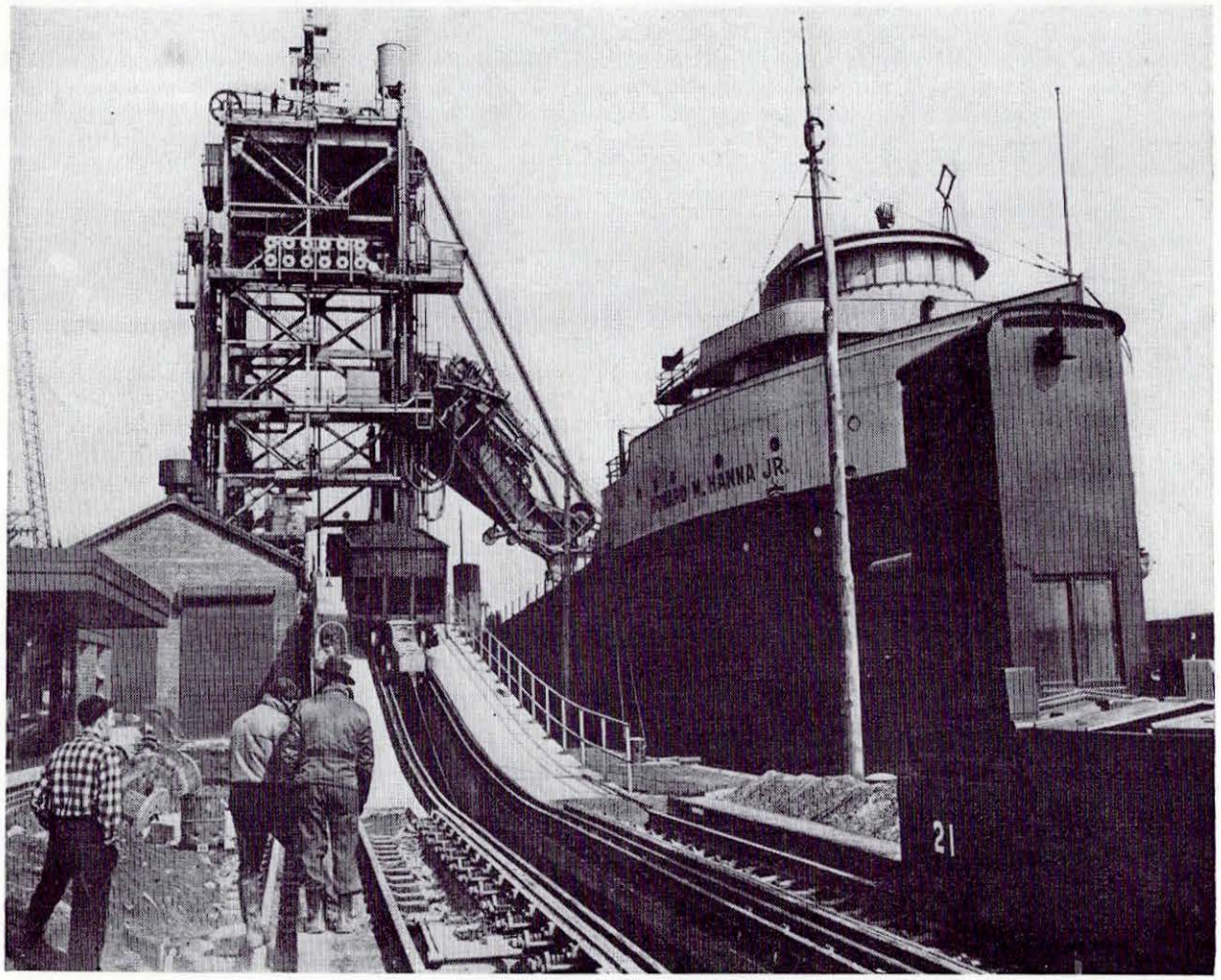
At the retarder, which in each case is located about 200 ft. in advance of the dumper, a barney of the usual type comes up out of a pit, engages the back of the car and pushes it up the incline to the dumper platen. Here it is clamped, lifted, turned over, and its coal dumped into a pan, from which it flows through a telescopic chute into the hold of a vessel moored alongside the dumper. Flow retarders are installed in the pan to prevent degradation of the coal, and, in addition, the coal is automatically sprinkled with a chemical to reduce dust. Furthermore, trimmers of the latest design are applied to the chute to distribute the coal in vessels uniformly with a minimum breakage. When the empty car is righted and returned to track level at the dumper, it is pushed off the platen by the next car moving up the ramp and is returned to the yard by the kickback trestle.

Ore Facilities Are Compact

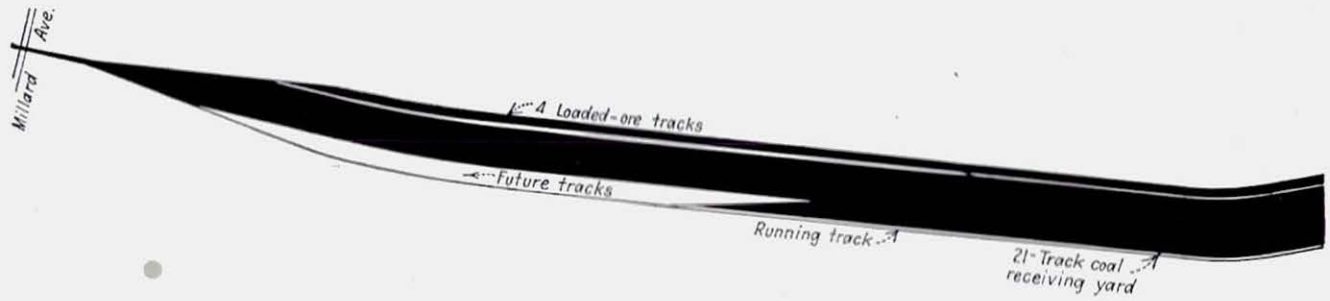
Each dumper is fully equipped with automatic interlocking devices to insure safety during all phases of the operation. The dumper tower is provided with built-in water, compressed air and electric service lines,



Above—The two Hulett ore machines on the west pier have a combined capacity of more than 30 tons a minute. Below—Transferring coal from cars to a lake vessel at the new electrically-operated coal dumper—one of three such dumpers to serve the new lakefront terminal. Note the inert retarder in the foreground, which holds each car until the barney engages it



Schematic drawing of the various yards, piers, and other facilities comprising the new Lakefront Dock & Railroad Terminal property at Toledo



with convenient outlets in each of the latter lines so that welding may be done when needed and electric and pneumatic tools of all types can be used for maintenace purposes or for making emergency repairs.

The two ore unloaders on the ore pier are of the Hulett type, each with a capacity of more than 15 tons per minute, and were moved to their new locations from former B. & O. docks about seven miles up the Maumee river. These machines will unload ore from boats and load it into cars on four tracks extending the full length of the pier. These tracks diverge at the south end of the pier into a seven-track supporting empty and load yard holding 112 cars. In this yard two narrow-gage electric pushers operate, one between tracks two and three, and the other between tracks five and six, to handle empty cars to the pier and the loaded cars away—the pusher tracks extending continuously the full length of the pier. The ore-handling track layout also provides that steam locomotives can push cars from any of the empty car tracks out onto the pier, and then move to a yard track filled with loads and shove them to any of the four ore storage tracks south of the throat of the yard.

Engine Facilities Provided

Like the dumpers, the ore-loading facilities include an individual substation, utility building; and storage building. A feature of the ore-handling operation is the weighing of the ore as it is loaded, which is done by scales built into the Huletts. These weights are checked at intervals by spot weighing individual cars on a new track scale located between the two ore yards.

TABLE III—IMPORTANT ITEMS OF CONSTRUCTION EQUIPMENT USED

Cranes	27
Bulldozers	15
Pile-driving outfits	10
Semi-trailer dump trucks	25
Air compressors	15
Tractors	6
Central concrete mixing plant	1
Transit concrete mixers	7
Power track wrenches	2
Spike drivers, pneumatic	6
Spike drivers, power operated	2
Rail saws	2
Electric tampers	2
Power jacks	2

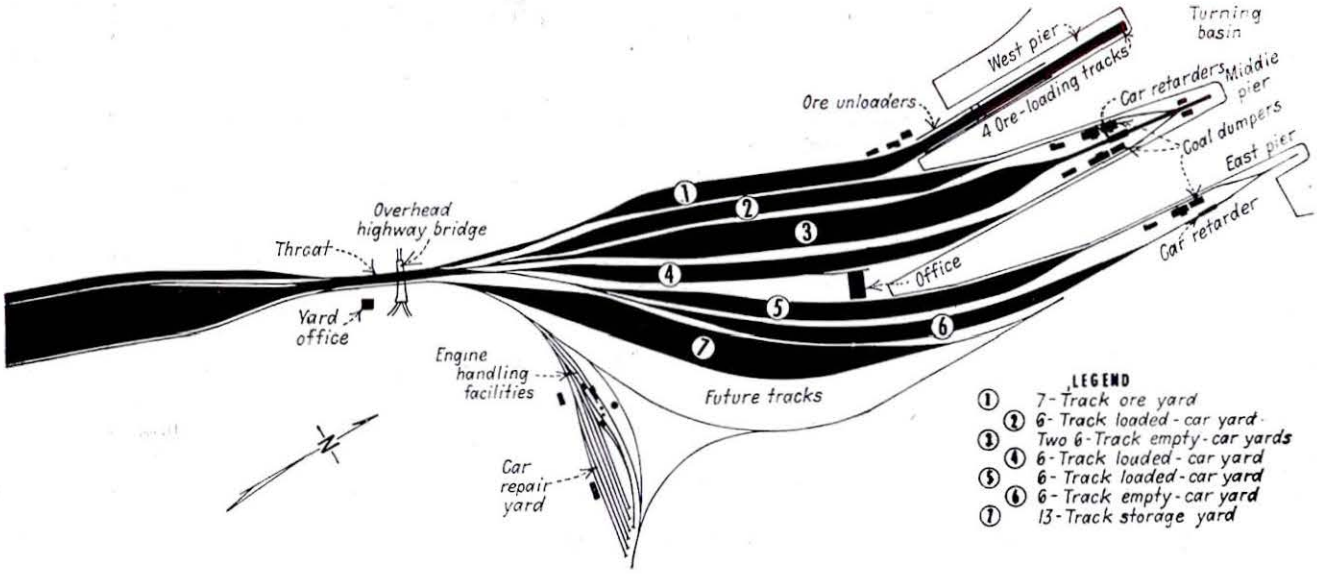
The engine terminal in the new layout is of the "one-stop" design to speed up engine servicing. This includes a conveyor-type coaling station with sanding facilities, an ash removal plant, a water-treating plant, a 100,000-gal. steel water tank, two water columns, and a 50-ft. concrete inspection pit. Water is pumped to the treating plant from the lake by a 15-hp. pump. A four-track car repair yard will be constructed adjacent to the engine tracks. These facilities will be served by a storage building and a utility building.

The operation of the terminal is directed from an all-purpose building located at the foot of the slip between the east and middle piers. An inter-office communication system connects this building with the yard office located near the throat between the 21-track receiving yard and the dock-supporting yards, and directly south of the ore-dock access bridge at this point. Similar communication facilities reach other control points on each pier. Loud-speakers are located at the Millard avenue entrance to the yard, at the throat, near the engine terminal, and on the coal and ore machines. Floodlights are located at Millard ave., near the yard office, and at the dumpers and unloaders, providing adequate lighting for all yard and machine operations.

Trackwork of High Quality

Fifty-six miles of tracks were constructed in the new facilities. All tracks consist of new, treated crossties, fully tie plated, on which excellent quality secondhand 127-lb. Dudley-section rail is laid. The rail ends are joined by four bolts in six-hole bars, which were applied after the rail had been brushed with No-Ox-Id for the full length of the bars. There are 222 switches—all new—with 16½-ft. points, with switch braces held to the ties by screw spikes. With the exception of two double crossovers, all turnouts are No. 8. The frogs, with the exception of those on the ore tracks, are all self-guarded manganese, held in place by hook-flange frog plates. The frogs in the ore yard are rail-bound manganese, with "T" guard rails bolted at the ends through foot guards, and held in place by double adjustable braces. Complete routes through the main yard and around a "Y" alongside the engine facilities have been provided, using rail-bound frogs to permit the use of all types of road and yard engines.

The construction of the trackwork was highly



mechanized and was carried out rapidly by employing the usual maintenance machines, except in two outstanding instances. One of these, to which a great deal of credit is given for the rapid progress of the track laying, was the delivery of the crossties strapped together in bundles of 40 to 50 ties each. These bundles were unloaded by crane, either in stock piles or directly where needed. Those stock-piled were loaded on trucks by crane and then unloaded along the new tracks at regular intervals. A large saving in labor and time is said to have been achieved by this device of bundling ties for handling, which involved only a small additional cost over the regular price at the treating plant.

The other unusual mechanized feature of the track laying was the manner of fastening the switch braces to the ties. When the switches were laid, the braces were held in place temporarily by a single cut spike in each plate. About two weeks later, two men bored holes in the switch ties with an air drill, using a special jig, and turned down screw spikes with an impact wrench. These two men could apply the 72 lag screws in a switch in an hour. To have performed the operations by hand would have taken a full day.

The tracks were laid on eight inches of cinders previously spread over the subgrade, and were subsequently raised by power jacks on four more inches of cinders and tamped by electric tampers. Throughout, the yard areas are subdrained with asphalt-treated, perforated metal-pipe laterals emptying into larger transverse concrete pipes at 400-ft. intervals. These concrete pipes have been constructed with concrete-block catch basins, with cast iron gratings, which carry surface water to drainage mains.

Yard Operation Is Smooth

Many factors are combined in the facility to prevent congestion and to speed and simplify operation. One of them is the large turning basin and adequate berthing space provided for vessels, which is expected to facilitate the waterborne phase of the operations. Another is the close support given the new layout in the Baltimore & Ohio's Rossford yard—coal capacity 2,000 cars—10 mi. away, and by the New York Central's Stanley yard—capacity 4,500 cars—only 7 mi. distant.

Still another factor lies in features of the layout itself, including favorable grades, and the four-track throat arrangement between the receiving yard and the various dock yards. In this latter feature, largely increased flexibility is provided by making it possible to make movements from any point in the receiving yard to any location in the various dock yards. Furthermore, coal movements, ore movements, empty movements and enginehouse or car-shop movements can be made through the throat simultaneously. The "Y" can be reached from any track in the throat. All of these factors will contribute to the aim of the terminal management to load coal at the capacity rate of a car a minute per dumper as long as boats are available to receive it.

Preparation of Plans

The plans and specifications—and construction—for the Lakefront Dock & Railroad Terminal were prepared and executed under the general direction of W. N. Young, chief engineer; B. G. Etchison, engineer of construction; K. L. DeBlois, design engineer; J. C. O'Brien, auditor; and C. F. Meyers, terminal superintendent. The general contract was handled as a joint venture of the Walsh Construction Company, of Davenport, Iowa, and the Bates & Rogers Construction Corp., of Chicago, with H. H. Dugan, project manager, and L. J. Bullen, assistant project manager. These companies employed more than $2,000,000 worth of construction equipment in performing the contract. The Great Lakes Dredge & Dock Co., Chicago, performed the dredging of the slips and turning basin. The new dumper was supplied and erected by Heyl & Patterson, Pittsburgh, Pa. The dismantling, remodeling, and reconstruction of the other ore and coal-dumper machines were carried out by McDowell Company and Dingle Clark Company under general contract with the Wellman Engineering Company, all of Cleveland, Ohio.

WILL THERE BE FUEL FOR DIESELS?

Outlook discussed at New York Railroad Club meeting—The possibility of a national emergency must receive adequate consideration

The prospect for a continued increase in the use of petroleum distillates as the major source of energy for the movement of railway trains, for household and other space heating, and for industry, versus the continued use of coal-burning railway motive power, was the theme of the meeting of the New York Railroad Club held on April 15. The speakers were Dr. W. J. Sweeney, vice-president of the Standard Oil Development Company, New York, who discussed the availability of petroleum products and their use by the railroads, and Earl C. Payne, consulting engineer of the Pittsburgh Consolidation Coal Company, Pittsburgh, Pa., who dealt with the coal outlook for railway fuel. The national defense aspect of the fuel situation was brought into the discussion by Brig. Gen. Paul F. Yount, acting chief of the Transportation Corps, United States Army, during the discussion of Doctor Sweeney's paper. An abstract of Doctor Sweeney's paper and a resume of its discussion follows. [Mr. Payne's paper on the Outlook of Coal for Railroad Fuel will appear in a later issue.]

Petroleum products—fuels and lubricants—began their career of service in railroad Diesels in this country almost a quarter of a century ago when the first Diesel-electric switcher was put into operation. As the number of Diesel-electric locomotives has increased and as they have been used on longer and more important runs, the demand for Diesel fuel has increased rapidly. Today the rate of consumption is about 56,000 barrels a day. We estimate that about three million horsepower of new railroad Diesels will be built in this country each year for the next five years. At a fuel consumption rate of three barrels per horsepower-year, railroad Diesel fuel demands will increase about 25,000 barrels a day every year until 1953. It seems a safe estimate that the railroads in this country at that time will be using about 18,000 barrels a day of Diesel fuel. On the basis of the 1945 figures for haulage, we estimate that if all railroad duties were taken over by Diesels the total consumption of Diesel fuel would be in the neighborhood of 300,000 barrels a day.

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Switch engines:								
B.t.u. per loco.-hr. (000)	11,100	11,300	9,010	9,250	845	850	13.0	13.0
Freight engines:								
B.t.u. per ton-mile	1,600	1,665	1,220	1,290	238	224	6.7	7.4
Passenger engines:								
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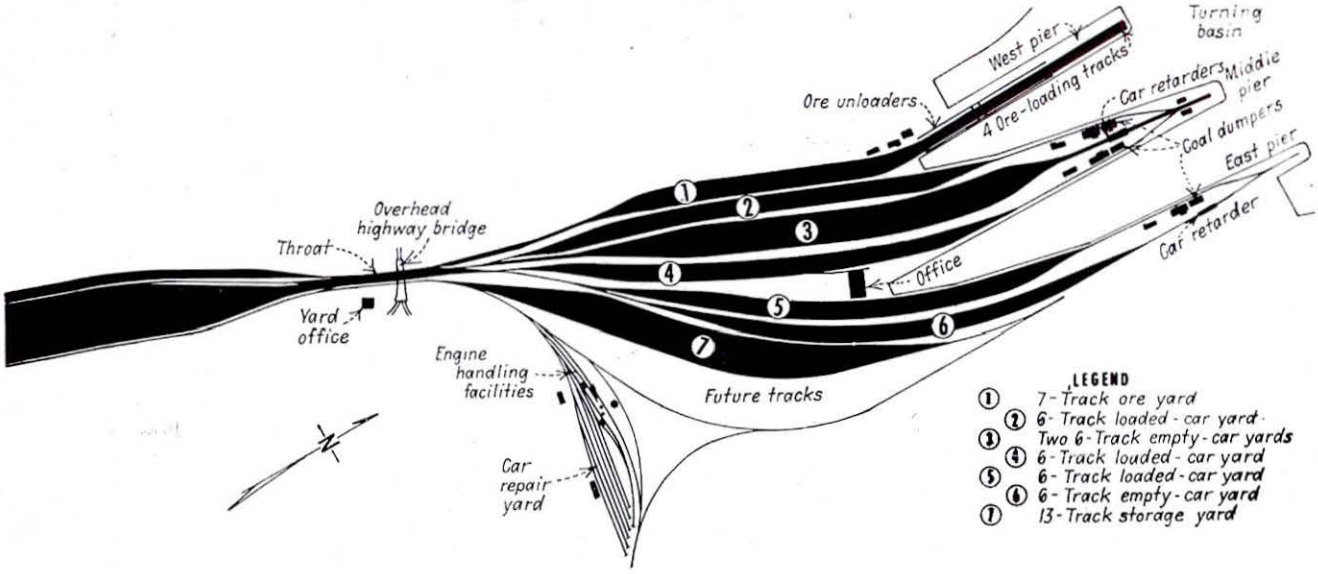


mechanized and was carried out rapidly by employing the usual maintenance machines, except in two outstanding instances. One of these, to which a great deal of credit is given for the rapid progress of the track laying, was the delivery of the crossties strapped together in bundles of 40 to 50 ties each. These bundles were unloaded by crane, either in stock piles or directly where needed. Those stock-piled were loaded on trucks by crane and then unloaded along the new tracks at regular intervals. A large saving in labor and time is said to have been achieved by this device of bundling ties for handling, which involved only a small additional cost over the regular price at the treating plant.

The other unusual mechanized feature of the track laying was the manner of fastening the switch braces to the ties. When the switches were laid, the braces were held in place temporarily by a single cut spike in each plate. About two weeks later, two men bored holes in the switch ties with an air drill, using a special jig, and turned down screw spikes with an impact wrench. These two men could apply the 72 lag screws in a switch in an hour. To have performed the operations by hand would have taken a full day.

The tracks were laid on eight inches of cinders previously spread over the subgrade, and were subsequently raised by power jacks on four more inches of cinders and tamped by electric tampers. Throughout, the yard areas are subdrained with asphalt-treated, perforated metal-pipe laterals emptying into larger transverse concrete pipes at 400-ft. intervals. These concrete pipes have been constructed with concrete-block catch basins, with cast iron gratings, which carry surface water to drainage mains.

Yard Operation Is Smooth

Many factors are combined in the facility to prevent congestion and to speed and simplify operation. One of them is the large turning basin and adequate berthing space provided for vessels, which is expected to facilitate the waterborne phase of the operations. Another is the close support given the new layout in the Baltimore & Ohio's Rossford yard—coal capacity 2,000 cars—10 mi. away, and by the New York Central's Stanley yard—capacity 4,500 cars—only 7 mi. distant.

Still another factor lies in features of the layout itself, including favorable grades, and the four-track throat arrangement between the receiving yard and the various dock yards. In this latter feature, largely increased flexibility is provided by making it possible to make movements from any point in the receiving yard to any location in the various dock yards. Furthermore, coal movements, ore movements, empty movements and enginehouse or car-shop movements can be made through the throat simultaneously. The "Y" can be reached from any track in the throat. All of these factors will contribute to the aim of the terminal management to load coal at the capacity rate of a car a minute per dumper as long as boats are available to receive it.

Preparation of Plans

The plans and specifications—and construction—for the Lakefront Dock & Railroad Terminal were prepared and executed under the general direction of W. N. Young, chief engineer; B. G. Etchison, engineer of construction; K. L. DeBlois, design engineer; J. C. O'Brien, auditor; and C. F. Meyers, terminal superintendent. The general contract was handled as a joint venture of the Walsh Construction Company, of Davenport, Iowa, and the Bates & Rogers Construction Corp., of Chicago, with H. H. Dugan, project manager, and L. J. Bullen, assistant project manager. These companies employed more than $2,000,000 worth of construction equipment in performing the contract. The Great Lakes Dredge & Dock Co., Chicago, performed the dredging of the slips and turning basin. The new dumper was supplied and erected by Heyl & Patterson, Pittsburgh, Pa. The dismantling, remodeling, and reconstruction of the other ore and coal-dumper machines were carried out by McDowell Company and Dingle Clark Company under general contract with the Wellman Engineering Company, all of Cleveland, Ohio.

FREIGHT RATES GOING UP MAY 6

Higher interim advances in Ex Parte 166 case will put charges on basis where 1948 net railway operating income of about $948 million is indicated — provided wage and price lines hold

By WALTER J. TAFT
Washington Editor, Railway Age

Freight rate increases authorized by the Interstate Commerce Commission in its April 13 report as a further measure of interim relief in the Ex Parte 166 proceeding will become effective May 6. Taking advantage promptly of the 10-days-notice permission embodied in the report, the railroads got the necessary tariffs on file April 26.

As reported in the *Railway Age* of April 24, page 42, where the commission's report was reviewed, the new adjustment is expected by the commission's staff to yield approximately $300 million a year. It will substitute an overall advance of 21.4 per cent for the increase of slightly more than 17 per cent which became effective January 5 to supplant the first of these interim adjustments—the 8.9 per cent boost which had been in effect from October 13, 1947.

Still $593 Million Short

The prima facie showing now is that the additional $300 million will raise the annual-basis yield of these Ex Parte 166 interim increases to $1,535 million above that of rates in effect prior to the first of such increases, i.e., the October 12, 1947, basis. This compares with an estimated yield of $2,128 million from the permanent increases sought by the railroads in their Ex Parte 166 application which calls for advances averaging overall about 29.2 per cent. The railroad proposal is compared with the relief thus far granted in the accompanying table.

Ex Parte 166: Interim Increases Compared with Permanent Advances Sought in Railroad Application

	Interim Increases		Increases Sought	
	Per Cent	Amount (millions)	Per Cent	Amount (millions)
Eastern District	23.2	$ 644	30.8	$ 862
Pocahontas Region	16.6	75	19.0	93
Southern Region	22.2	219	29.3	301
Western District	20.1	597	28.5	872
United States	21.4	$1,535	29.2	$2,128

At hearings in the proceeding, the railroads estimated that, if the full increases sought were effective throughout 1948, their net railway operating income for this year would be approximately $1,283 million; and their net income would be about $954 million. These estimates assumed that prices and wages would remain at the November, 1947, level, the allowance for wage increases to be granted employees represented by the three holdout operating unions having been the 15½ cents per hour awarded to other employees.

Carrying forward these assumptions, and allowing for income taxes on the one hand and the recent increase in mail pay and the January advance in western passenger fares on the other, it would seem that the increase now granted, if unchanged throughout the year, would make the 1948 net railway operating income about $948 million, or some $335 million less than the $1,283 million anticipated by the carriers from their permanent proposal. The hoped-for net income would be down in like amount. The carrier estimates put the 1948 freight traffic at 630 billion ton-miles and the passenger traffic at 39 billion passenger-miles.

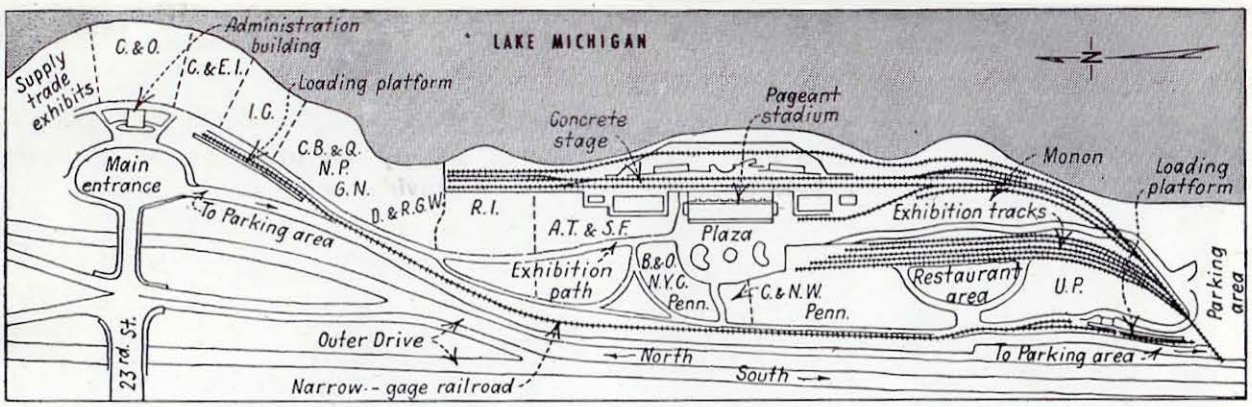
All Won't Be Realized

Like all indicated yields from general rate increases the foregoing are subject to discounts of undeterminable amounts, because the ideal conditions necessary for their full realization are never present. For example, the estimates assume that state authorities will act promptly to authorize application of the full interstate increase to intrastate rates; and they make no allowance for subsequent "whittling" which results from adjustments in rates where the full increase cannot be made to "stick," because of competitive situations, disrupted rate relationships, etc.

These Ex Parte 166 increases, of course, are being superimposed on the advances made in 1946 and 1947 pursuant to authority granted by the commission in the previous general freight rate case—Ex Parte 162. The final report in that proceeding supplanted an interim increase of 6.5 per cent, which had become effective July 1, 1946, with a 17.6 per cent increase. The latter was the January 1, 1947, adjustment which was calculated to yield approximately $1,018 million a year. By adding this Ex Parte 162 increase to the $1,535 million expected to be realized on an annual basis from the Ex Parte 166 advances thus far authorized, the commission's staff now estimates that freight rates have increased "slightly over $2,500 million" a year or approximately 43 per cent since June 30, 1946. This estimate was given in the explanatory notice by I.C.C. Secretary W. P. Bartel, which accompanied the April 13 decision.

The estimated annual yield of more than a billion dollars from the increases of January 1, 1947, indicated that the commission was there giving the carriers the aggregate amount of additional revenue sought in that Ex Parte 162 case. As noted above, the overall increase was 17.6 per cent, which resulted from in-

(*Continued on page* 47)



This preliminary plan of the Chicago Railroad Fair shows tentative exhibition areas and other details

PLANS FOR "GREATEST RAILROAD SHOW" WELL LAID

50-acre site extending a mile along Lake Michigan at Chicago will be scene of six-week exhibition, July 20 to September 6, celebrating railroad progress

Work on the Chicago Railroad Fair is well under way. Illinois Central track forces laid rails last week across the city's busy "Outer Drive" to give access to the site for rail-borne equipment, and there are in good evidence many other physical preparations to prepare the area to receive and handle an estimated total attendance of more than two millions. The staff of the fair has made available to *Railway Age* as many details of plans as is practicable at this stage, which are here summarized with the caution that they are distinctly *preliminary.*

The fair stems from the fact that 100 years ago the "Pioneer" of the Galena & Chicago Union (later Chicago & North Western) made the first run of a steam locomotive west of Chicago, and so opened the first chapter of the great epoch of western railroading. The desire among Chicago railroaders to mark this historic event with something noteworthy crystallized into the idea of a great railroad fair which would mark the contribution of the railroads to American life on a national scale. As it now stands, the fair is well on its way to winning the sobriquet "the greatest railroad show ever held."

Money, and Other Necessities

The participating railroads already have subscribed in excess of $1,000,000 for the capital cost of the fair. In addition, many roads are busily preparing for individual exhibits at a total expenditure of approximately $1,000,000. Some $3,000,000 worth of motive power and rolling stock will be on exhibition at all times during the fair.

A mile-long area covering 50 acres—less than 10 min. traveling time from Chicago's "Loop"—has been set aside for the presentation. More than 2,000,000 persons are expected to visit the fair from its opening on July 20 until its conclusion on Labor Day, September 6, and many roads are planning excursions to bring visitors from distances up to 500 mi. The fair site can be reached easily by railroad, surface lines and automobile.

It has been estimated that eight hours will be required for a person to view all of the exhibits and the pageant. A 25-cent admission fee is to be charged for entrance to the grounds, open from 10 a.m. to 10 p.m. daily. A sixty-cent admission price will be in effect for the outdoor pageant, which will be the feature attraction. The pageant gate receipts are expected to make that phase of the fair self-supporting, including the salaries of actors during a five-week rehearsal period.

Feature of the Fete

The dramatic 1¼-hr. stage production will re-create vividly the great moments in the development of rail transportation and show its far-reaching influence on the growth of the nation. Also high on the list of fair attractions will be a narrow-gage railroad on which visitors may ride from one end of the grounds to the other. Other highlights of the affair will be elaborate exhibits by various railroads, exhibits of railway equipment manufacturers designed to show developments in the various types of equipment used by the railroads, indoor and outdoor theatre attractions and night-time fireworks.

The fair, in all of its phases, will be designed to illustrate for the public the contributions the railroads have made in the settlement of the country, in the develop-

At 2:30 a.m. on April 22, a "graveyard shift" of some 100 Illinois Central trackmen were busily installing rail across Chicago's northbound "Outer Drive" to connect with trackage of the Chicago Railroad Fair. A similar scene took place the previous night as the men laid track across the southbound section of the drive

ment of its economy, in the winning of its wars and in the elevation of its standard of living. It will also indicate how the railroads will contribute to the nation's future progress, as well as illustrate the efforts of the carriers' and their suppliers to assure higher standards of service, convenience, comfort and safety.

Pageant on Mammoth Scale

Participating in the fair's pageant will be 150 fully-costumed professional actors, 56 horses and oxen and 18 locomotives operating under their own power. It will be presented four times daily on a concrete stage 450 ft. long by 110 ft. deep. Three tracks are to be laid across the stage, enabling trains to move simultaneously in both directions. In addition, 1½ mi. of service track will be laid to feed the various trains into the production. Trackage for the entire fair—expected to total in excess of five miles—is being supplied through an arrangement with the Illinois Central and laid by that road's forces.

With Lake Michigan as its backdrop, the stage production will be viewed from a specially constructed stadium seating 5,000 persons. The story of the railroads will be told in acts and scenes in pantomime, while two narrators describe the action in the manner of a Greek chorus. The initial action will date back to 1673, when the canoe, horse and dog-drawn travois were the sole modes of transportation. In subsequent scenes, the pageant will trace chronologically the story of transportation through the days of circuit riders, the stage coach, the freighting wagon and wood-burning locomotives, up to today's modern streamlined equipment.

Nine wood-burning engines are scheduled to appear in a phase of the show dramatizing railroading between 1829 and 1836.

Many famous locomotives or replicas of them will appear in the pageant, including the "Rocket," "Stourbridge Lion," "John Bull," "Best Friend of Charleston," "Tom Thumb," "Atlantic," and the "Lafayette." The eventful run of the "Pioneer," signaling the be-

ginning of the final conquest of the West, will be re-enacted.

The driving of the golden spike at Promontory, Utah, will be the subject of a scene in which track gangs will be shown at work, eating at a "chuck wagon," attacked by Indians, and rescued by the military. Among many other scenes will be a Harvey House in an 1878 setting; the race between the Baltimore & Ohio's "Tom Thumb" and a horse; Lincoln's funeral train; and the finish of the speed run of the Burlington's "Pioneer Zephyr." As a finale to the show, a modern steam locomotive and a Diesel will approach and meet each other in the center of the stage. Edward Hungerford, railroad writer, is the author of the pageant script.

The equipment for the narrow-gage railroad is being furnished by the Burlington Lines. An old-fashioned station reminiscent of the mining era of the Seventies and Eighties will be constructed in connection with the small line, and old-time telegraphic and signal devices will be installed.

The train will consist of a locomotive and coaches actually operated during the lush days of narrow-gage lines in Colorado. The cars include three open-top observation coaches, a combination baggage car and railway postoffice, a coach with red plush upholstery, and a special car designed for visiting dignitaries. The road will be known as the Deadwood Central.

Passengers may board the train at either end of the grounds, at stations designated "Deadwood" and "Central City," so named after cities in South Dakota and Colorado, respectively, which were served at one time by narrow-gage lines. The equipment will carry approximately 200 persons on each trip, at 10 to 12 m.p.h., for a fare of 10 cents.

Exhibits of Individual Roads

With but few exceptions, exhibiting plans of the various roads are still in their preliminary stages. The Atchison, Topeka & Santa Fe, however, has announced its intention to construct an Indian village. Approximately 125 Indians of six famous tribes will carry on their daily activities before fair visitors, who will be allowed to roam throughout the exhibit and witness the Indians weaving baskets and making dolls, moccasins and other items. The village will include an arts and crafts building, a trading post and curio shop, Pueblo-type dwellings and other similar Indian establishments.

The Chicago & North Western plans to reconstruct a life-size replica of Chicago's first passenger station. In addition, the road will display motor-driven models of its "Pioneer" and "400." The Denver & Rio Grande Western will install a modern air-conditioned coach as a motion picture theatre to show travel and industrial motion pictures.

Th Chicago & Eastern Illinois will present a scale reproduction of the state of Florida, measuring 130 ft. by 100 ft., complete with palm trees and other items symbolic of the state. A scale model of the "Dixie Route" will be installed in a building at the road's exhibit.

The Union Pacific will display locomotives covering the past 75 years and present exhibits depicting development and progress of states served by the road. The Baltimore & Ohio, New York Central and Pennsylvania are planning a joint exhibit featuring a miniature railroad constructed in great detail. Another combined exhibit will be that of the Burlington Lines, Great Northern and Northern Pacific, presenting a rodeo and other activities typical of the vacation regions served by the three roads.

The exhibits of railway supply manufacturers will be located on the north end of the grounds, where some 60,000 sq. ft. of space has been allotted for that purpose. Tents of approximately 60 ft. by 20 ft. will be rolled up to permit maximum view by fair visitors. Negotiations for exhibit space are now under way between the fair management and a number of manufacturers. Among those firms which have made definite arrangements for space are the Pullman Company, the Electro-Motive Division of General Motors Corporation, the Pullman-Standard Car Manufacturing Company and the Budd Company.

Track Exhibits

A series of exhibition tracks will be installed for the display of the name trains of 1948—including the "Train of Tomorrow"—as well as all types of passenger and freight cars, both historic and modern. The railroads will change this equipment frequently so as not to interfere with their normal operations. An exception to this rule, however, will be the "Twin Cities Hiawatha" of the Chicago, Milwaukee, St. Paul & Pacific, which will remain throughout the fair. The cars for this train are now being constructed at the road's shop in Milwaukee, Wis.

Several types of arrangements are being made for serving meals to visitors. Six roads have announced intentions to install modern dining cars on which typical menus will be offered and lounge cars serving light refreshments. The dining car meals will be prepared and served by regular crews of the various roads. Also being prepared is a restaurant area, where fair-goers may purchase basket lunches and eat beneath shade trees. In addition, many smaller soft-drink stands are being built.

Among the many construction projects now under way at the fair site are the widening by 18 ft. of a bridge at 23rd street to accommodate four lanes of traffic; the addition to the bridge of concrete-and-steel footwalks; the preparation of parking space to accommodate 1,750 cars; and the erection of a 7,000-ft. fence around the entire grounds.

The principal railroads of Canada and Mexico also have been invited to participate in the fair. President Truman recently received a scroll inviting him to attend, the presentation being made personally by Major Lenox R. Lohr, president of the fair and former general manager of the 1933 "Century of Progress." Other officers of the fair are: Vice-president, R. L. Williams, president of the Chicago & North Western; Treasurer, Wayne A. Johnston, president of the Illinois Central; and Secretary, G. Murray Campbell, vice-president and executive representative of the B. & O. In addition to Messrs. Williams and Johnston, the executive commitee consist of the following railroad presidents: Ralph Budd, Burlington Lines; C. H. Bulford, Milwaukee; Fred G. Gurley, Santa Fe; and J. D. Farrington, Rock Island.

WILL THERE BE FUEL FOR DIESELS?

Outlook discussed at New York Railroad Club meeting—The possibility of a national emergency must receive adequate consideration

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Previous experience with smaller high-speed Diesel-engine equipment has indicated that the use of detergent-type lubricants is a very effective method of reducing the deposits formed. High quality detergent lubricants generally possess excellent anti-oxidant and dispersing tendencies. These properties are illustrated in Fig. 1. The two pistons are from the standardized L-4 36-hour Chevrolet engine test which is designed to measure the performance of an oil under very severe oxidizing conditions. The oil temperature, for example, is held at 280 deg. F. and the test is at full horsepower output. The piston on the left was run on a straight mineral oil and the skirts are covered with heavy varnish deposits. The piston on the right illustrates the performance obtained with a detergent oil under the same conditions; there is little or no varnish on the skirts.

While the laboratory and field data on smaller engines have shown that marked improvement in engine cleanliness and freedom from ring sticking could be obtained with detergent oils in automotive and stationary Diesel equipment, the tests run on the New York, Ontario & Western were needed for the proof of quality as railroad Diesel crankcase lubricants.

The test locomotive used is a 2,700-hp. Electric-Motive FT Diesel composed of two, two-cycle, 16-cylinder engines of 8½-in. bore by 10-in. stroke. The locomotive is used in regular freight service between Middletown, N. Y., and Mayfield Yard, Pa., and averages one round trip per day of 270 miles with loads varying from 1,000 to 4,000 tons. It is equipped with special recording instruments to measure continuously the pertinent operating temperatures and the horsepower ouput.

The data obtained in these field tests indicate that outstanding results can be obtained with properly compounded detergent oils. Such oils will minimize critical deposit formation and ring sticking so as to permit extended operation between overhauls. They have a low rate of additive removal so that the improved performance due to the additive may be maintained during the entire service period and they also have a high degree of oxidation resistance so that oil changes are not required more frequently than with straight mineral oils.

Fig. 2 shows the reduction in deposits obtained, the amount of deposits being plotted against miles of service. The top curve is for a straight mineral oil while the bottom curve is for two detergent oils, A and B. These oils contain similar detergent additives and gave nearly identical performance from the standpoint of engine deposits. The middle curve is for another detergent oil C which does not show the outstanding cleanliness properties of detergent oils A and B. Detergent oil B gave excellent results from the standpoint of engine cleanliness, but was not satisfactory because it caused excessive corrosion of silver wrist-pin bushings which at the time were used in the Electro-Motive Diesel under test. A comparison of sections from corroded and non-corroded bushings is given in Fig. 3. The corrosion difficulties with detergent oil B and the lack of outstanding cleanliness properties in detergent oil C emphasized the importance of proper compounding and also the importance of field as well as laboratory tests. In addition to its excellent performance in the Electro-Motive Diesel FT, detergent oil A also has outstanding engine cleanliness characteristics in the new 1,500-hp. F-3 Electro-Motive Diesel. This is shown in Table II.

TABLE II—COMPARISON OF PERFORMANCE OF DETERGENT OIL *A* IN ELECTRO-MOTIVE F-3 AND FT LOCOMOTIVES

Locomotive model	F-3	FT
Service	Mountain freight	Mountain freight
Miles of service	36,753	40,000
Engine hp.	1,500	1,350
Fuel consumed per hour at full throttle, gals.	95	85
Engine deposits:		
Overall engine	Light-medium (1.5)	Light (1.2)
Ring zone	Light-medium (2.0)	Light (1.8)
Piston skirt varnish	Light (1.5)	Very light (0.5)
Silver wrist-pin bushing corrosion	None	None

On the basis of such field tests, following adequate laboratory evaluation as a selection process, outstanding railroad Diesel oils compounded with the additive used in detergent oil *A* are now being marketed. Over ten million miles of service have been accumulated on these products by American railroads.

A word of caution is necessary in connection

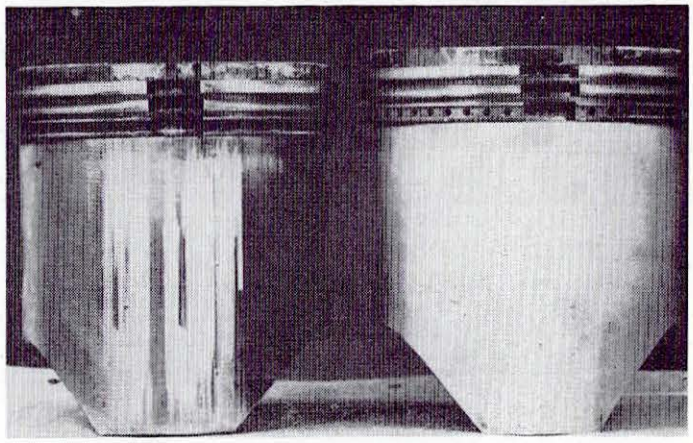
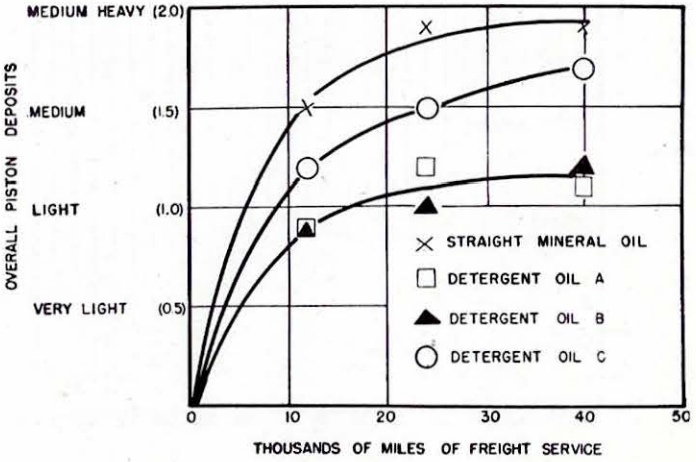


Fig. 1 — Comparative test results of Diesel pistons, one of which has been lubricated with straight mineral oil and the other with detergent oil

Fig. 2 — Performance of railroad Diesel lubricants in an Electro-Motive FT locomotive in freight service



with the change-over to detergent oil in regular railroad service. Locomotives which have been operated for extended mileages on straight mineral oils may have sludge and other deposit accumulations in various parts of the engine which a detergent oil will disperse. When the quantity of suspended material reaches the saturation point, these may be redeposited in locations having small clearances, with subsequent lubrication difficulties.

Accordingly, as a precaution, engines should be thoroughly flushed with detergent oils when the oil change is made, and for a limited period more frequent oil changes should be practiced.

In addition to full-scale lubricating-oil evaluation tests, tests are being carried on by our company on the fuel requirement of railroad Diesel locomotives. This requirement can be determined, of course, only on full-scale engines. The purpose of these tests are to find out what the actual requirement is, and to apply such data for the extension of Diesel fuel availability. These tests will be discussed after a look at the supply picture.

The Diesel Fuel Supply

Fig. 4 shows the crude-oil production and the proved reserves in the United States for the years 1918 to 1946. It will be noted that the billions of barrels of proved reserves year by year have been continually growing larger. As of 1946 the proved reserves are about a dozen times greater than the production rate. Production and consumption will, we feel, go up as years go by. New reserves also will be found, but the ratio of new reserves to future consumption is not presently determinable.

It is obvious that we are not faced with an immediate shortage of oil—certainly not so immediate that we cannot do something about supplies of liquid fuels by the application of already proved synthetic methods. Estimates have been made which indicate that the coal reserves alone are sufficient, if converted to oil, to supply oil for over 1,000 years at the present rate of consumption. In addition to coal, there are large reserves of other carbonaceous raw materials such as shale, natural gas and tar sands.

Table III shows the demand in the United States for various petroleum products over the ten-year period 1938-1947. It will be noted that over the nine-year period the total crude oil requirement has increased about 75 per cent, whereas the Diesel fuel requirement has increased 250 per cent. Also, the other major products with which Diesel demands compete increased at a faster rate than total demands. Kerosene, for example, increased 80 per cent and other distillate fuels 130 per cent. The railroad Diesel fuel demand has increased even more rapidly during this same period. There is, however, a reasonable satura-

TABLE III—U. S. DOMESTIC DEMAND FOR CRUDE AND PRODUCTS. THOUSANDS OF BARRELS DAILY

	1938	1944	1946	1947	Per cent increase over 1938
Gasoline	1,433	1,728	2,013	2,178	60
Kerosene	154	196	244	281	80
Diesel	58	192	148	200	250
Other distillate	264	380	517	617	130
Residual	800	1,399	1,307	1,420	80
Other	406	671	678	753	80
Total	3,115	4,566	4,907	5,449	75

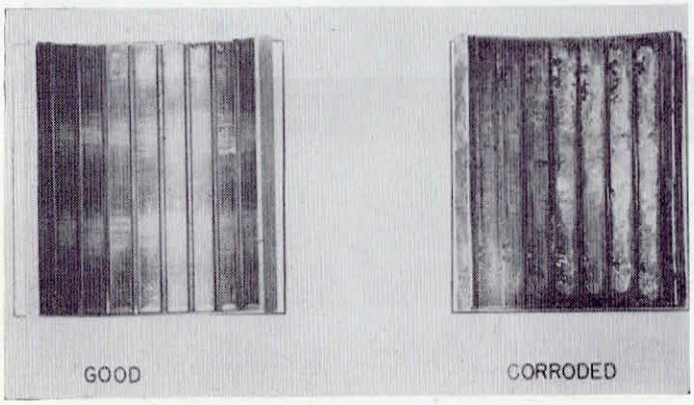


Fig. 3 — (Left) Difference in corrosive effects of two detergent oils on silver wrist-pin bushings

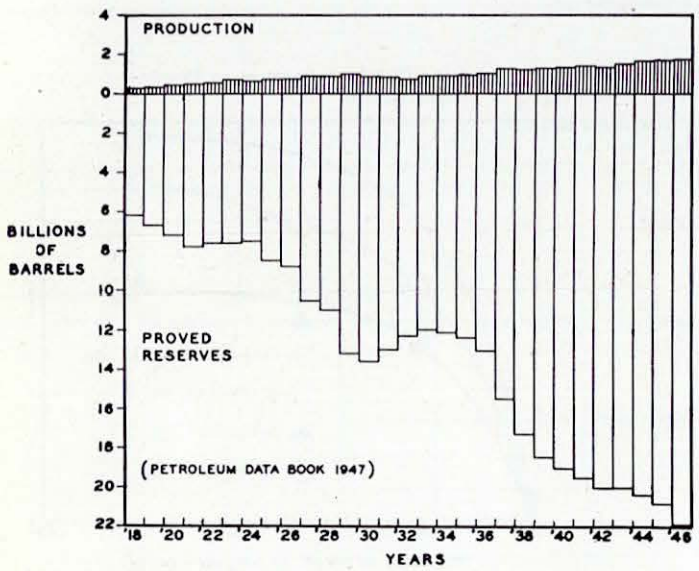
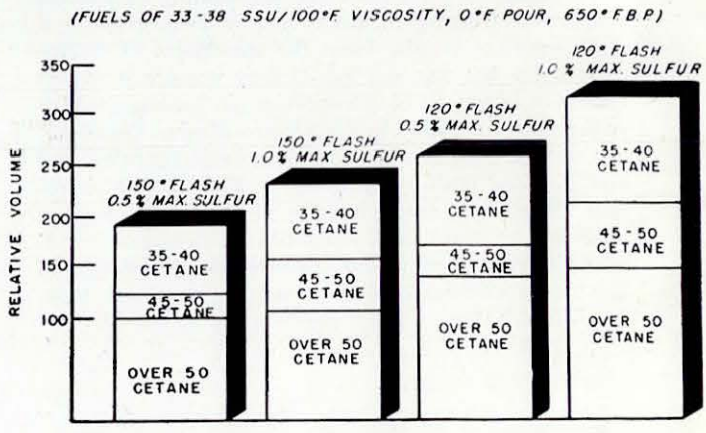


Fig. 4 — (Below left) Crude petroleum production in the United States compared to proved reserves

Fig. 5 — (Below right) Effect of Diesel-oil specifications on the Diesel fuel content of the crude



tion value to needs of the railroads and such a rate of increase will eventually approach a limit of 300,000 barrels daily, namely about six per cent on crude.

While this is relatively small based on the total of petroleum products, there could be a problem in connection with supply for the following reasons:

(1) The rate of increase for railroads is exceptionally high compared with the rate of increase for petroleum products generally.

(2) The type of product competes with distillate fuels generally which also show an abnormal increase in demand, particularly kerosene and Diesel fuels for other applications than railroads.

(3) The quality of Diesel fuel being demanded exceeds, in spot situations, that easily obtainable from the crude available. In other words, relaxation of specifications or added processing equipment might be necessary to produce the volume required.

Relation of Quantity to Quality

In any petroleum supply problem two factors are interdependent. They are quality and volume. The less restrictive the quality the easier it is to attain a given volume. It is assumed that railroads in the competition for what has sometimes been termed "the middle of the barrel" do not desire to limit their chances of obtaining their requirements by unnecessary quality specifications. Believing this to be true, our fuel studies are primarily geared to finding out what properties are really important in performance, so that no unnecessary limitations will be placed on volume available for railroad use.

TABLE IV—SPECIFICATIONS OF DIESEL LOCOMOTIVE FUEL

Inspection	Average of Five Engine M'f'r's. Spread	Average	Average of 14 Railroads Spread	Average
Viscosity at 100 deg. F., Seconds, Saybolt Universal				
Minimum	33-38	35	32-38	35
Max.	50-100	67	45-70	52
Flash point, deg. F.	-	150	-	150
Cetane no., min.	45-46	45	35-50	48
Sulphur, weight, per cent, max.	0.5-2.0	0.85	0.10-1.50	0.51
Distillation, deg. F.				
90 per cent point, max.	625-690	665	540-675	632
End point, max.	675-700	690	650-700	675

Users' specifications for railroad Diesel fuels are shown in Table IV. The following may be noted:

(1) Flash point appears to be limited at 150 deg. F. Possibly 120 deg. would be satisfactory. Such a flash point has been used in kerosene, and kerosene or blends thereof have been used satisfactorily in bus and truck Diesels.

(2) Cetane number requirements seem to average about 45; some purchasers demand 50. Are these qualities necessary to the satisfactory performance of the engines for which they are specified?

(3) Sulphur content varies from 0.5 to 2.0 per cent. Is the lower limit really needed when specified?

Fig. 5 shows what one refiner could do to extend supplies of railroad Diesel fuels from his present pool of crude-oil stocks. Starting with a restrictive specification base of 50 minimum cetane number, 0.5 per cent maximum sulphur and 150 deg. F. minimum flash, the following could be done at the expense of other products:

(1) 45 per cent increase of 50-cetane-number provided the flash could go to 120 and the sulphur to 1.0.

(2) 80 per cent increase of 150-deg. F. flash and 0.5 sulphur if the cetane could be dropped to 35.

(3) 130 per cent increase of 150-deg. F. flash if the sulphur could go to 1.0 per cent and the cetane to 35.

(4) 220 per cent increase if the flash could go to 120 deg. F., the sulphur to 1.0 per cent and the cetane number to 35.

We do not at present know how many of these relaxations can be tolerated and still get good engine performance, but we are on the way toward finding out. Some of the fuels that have been tested or are soon to be tested are shown in Table V.

It will be noted that our first series involves a group of fuels which flash at 125 deg. F., since by this route it is possible to extend supplies with the least degradation in cetane number and sulphur content. This method holds promise because of the interdependence of kerosene and high quality Diesel fuels. Both generally come from the same type of crude but they cannot be cut at the same time since kerosene is lighter and Diesel fuel heavier, while both have a common center fraction. The kerosene is the coat and vest; the present Diesel fuel the vest and pants. The 125 flash fuel is the coat, vest and pants and results in larger coverage for Diesel fuel supplies.

If the limit in cetane number has not been reached after testing these fuels, lower cetane fuels will be tested and these data will be discussed with the engine manufacturers and the railroads, for only by cooperation can generally acceptable compromises be arrived at for the mutual benefit of the petroleum and railroad people.

Please do not get the impression that the petroleum industry foresees a definite shortage, for that is not

TABLE V—HIGH-SPEED DIESEL FUELS, INSPECTION DATA

Inspection	Conventional High-speed fuel	Wide cut fuels: High cet. no., low sulphur	Low cet. no., low sulphur	Low cet. no., high sulphur
Viscosity at 100 deg. F., Seconds Saybolt Universal	35.2	33.4	35.5	35.5
Flash pt. deg. F.	165	125	125	125
Cetane no.	53	53	45	45
Sulphur, wt., per cent	0.2	0.1	0.2	1.0*
Distillation, deg F.				
Initial point	350	310	310	310
50 per cent point	510	485	500	500
90 per cent point	585	590	600	600
End point	640	630	650	650
Heating value, B.t.u. per gal.				
High	137,410	135,910	139,000	139,000
Low	128,830	127,450	131,000	131,000

*Maximum

the case. We do not dismiss the possibility since so many unseen new demands for energy might arise. The best available information for the immediate future might be summarized as follows:

1946-1948 Demand and Supply

Domestic demand for petroleum in the United States in 1946 exceeded 1945, the peak war year, and total demand, which includes exports, was only slightly below the 1945 level. Domestic demand continued to gain and by 1947 it alone was sufficient to exceed the total demand for the year 1945. The tremendous increase in domestic requirements was the result of heavy highway traffic, a high level of industry activity, increasing use of oil for home heating and greater use of Diesel fuels.

The requirements in 1946 were supplied without any great difficulty and inventories were partially restored. In 1947 there was more than 10 per cent gain in total demand and the industry had to push all of its facilities to their utmost to cope with the situation. For the year as a whole deliveries were almost sufficient to meet all requirements and nothing more than minor inconvenience resulted.

For the year 1948, the latest estimates of the Bureau of Mines show a gain in total demand of about 6 per cent over the record 1947 level. Crude-oil production is expected to show a substantial increase over 1947, and with some gain in natural gasoline production and imports the total supply is estimated to be about 8 per cent greater than last year. The realization of these supply and demand estimates would allow for a stock build-up of about 100,000 barrels a day and would indicate some easing in the situation unless unforeseen military requirements develop.

The balance between supply and demand is a fine one and may continue to be for the next two or three years. Accordingly, every barrel which can be saved is important. Relief of unnecessarily restrictive specifications will help the Diesel fuel situation appreciably in this respect, and so will the avoidance of diversion of high-quality Diesel fuels to heating purposes where coal will do just as well. Also, the fuel oil consumed in oil-fired steam locomotives is 270,000 barrels a day which is almost as large as the volume of Diesel fuel required to power all the railroads if completely converted to Diesel. The economics of the oil-burning locomotives might be looked into to see whether it would not be economical to back these out first as Diesels come in.

Discussion

In answer to a question as to whether the petroleum industry would be able to cope with the continued conversion to Diesel motive power to the point where steam would be eliminated, Dr. Sweeney said that, under normal conditions, he felt that with the economies that appear attainable by the railroads using Diesel fuel, it would be feasible to supply them. Dr. Sweeney reminded the audience that it is within bounds to convert coal into oil and that, despite the loss of 50 per cent of the heating value in the conversion process, it would be almost as economical to use the synthetic oil. The difficulty, he said, is that the conversion process will take a tremendous amount of steel.

C. E. Smith, (New York, New Haven & Hartford) referred to figures which indicate that if all of the oil-burning steam locomotives in the United States were replaced with Diesel locomotives, the reduced amount of liquid fuel required would be sufficient to replace the coal-burning locomotives. About 270,000 barrels of oil a day are now used on oil-burning steam locomotives, he said, most of which is of the residual class, and 56,000 barrels of Diesel fuel a day are being consumed by the railroads, a total of both classes of 326,000 barrels a day. To run all the railroads with Diesel oil would, he said, require about 300,000 barrels of Diesel fuel a day.

A Look at National Defense

During the discussion Brig. Gen P. F. Yount questioned Dr. Sweeney as to what the oil industry thinks the impact of the expansion in the use of jet engines in aircraft would be on the availability of Diesel fuel for locomotives, and the following exchange took place:

General, if I knew what the requirement for jet fuels was going to be, I guess I wouldn't tell anybody, and that just about leaves me in a position to say what everybody knows, namely that jet fuel will definitely compete with Diesel fuel. After all, the jet-fuel specification is gasoline plus everything above it which you can get that will still meet the freezing point, and some of that stuff would go into Diesel fuel. I have seen rumors in the press that the jet-fuel requirement is going to be big. If it is going to be really big, obviously it is not only going to cut into Diesel fuel, but it is going to cut into gasoline and fuel oil and almost into lubricants and other petroleum products. If there is a really big demand for jet fuel—for instance, half a million or more barrels per day — you cannot get it except from somebody else, and Diesel will be one of the sources. On the other hand, when you look at these figures of seven times as much work per B.t.u. in the use of Diesel fuel on the railroads as compared with coal, certainly, energy-wise and overall, the Diesel for railroads has a pretty good margin in any tight situation.

General Yount: If our experience in the use of petroleum products means anything, the increase in the consumption between World War I and World War II was something on the order of 5,000 per cent, and while I do not think that anybody can forecast that percentage in the future, certainly without knowing when we might be in another national emergency, I think we may expect a very, very greatly increased consumption of petroleum products in any future national emergency. Even if that were to come today, the demand for petroleum products would probably be double that of World War II, in the light of present mechanization, and the whole trend in equipment has been one toward increased mechanization. As we go progressively forward in the years we may certainly expect a very great increase in such demands. I regret that I have forgot the exact consumption of the armed forces, but my best recollection is that it was on the order of one and one-half million barrels a day at the very peak of the war.

Dr. Sweeney: No doubt about that. Aviation alone was almost 600,000.

General Yount: Supposing that we assume now that, in the very near future, that were doubled, in which event we would place upon the oil industry a demand for three million barrels per day for the operation of the armed forces. Then we go into your proved reserves and, with an increasing ratio like this, it would work out in this way: With our consumption at something in excess of eight million barrels a day as against the 22 billion barrels in proved reserves, they would be used up in about six years. At present we are depending on a great deal of imports and, of course, we have a certain amount of export as well, which is a counterbalancing factor, but we have no way of assuring ourselves that we may continue imports, and if we have any friends at that point we certainly would face the danger of having greater export requirements.

Dr. Sweeney: If you are going to double the petroleum requirements in a war you are going to need steel and other things, and that is going to be a tough job.

General Yount: That is the danger. The competitive position of steel is one of the most critical factors in the discussion.

Freight Rates Going Up

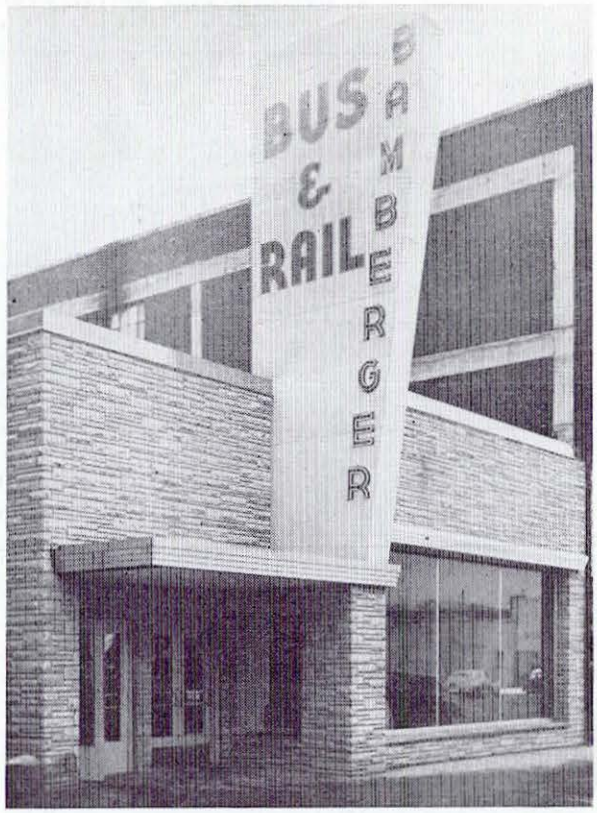
(*Continued from page* 38)

creases averaging approximately 17.9 per cent in the Eastern district and 17.4 per cent in other territories. The estimated annual-basis yield of $1,018 million was divided about as follows: Eastern district, including Pocahontas region, $466 million; Southern region, $140 million; Western district, $412 million.

Increases in Other Charges

These general freight rate increases since June 30, 1946, have been supplemented by increases in other rates and charges of the carriers, which became effective during the same period. In that connection, I.C.C. Secretary Bartel's notice said the commission's staff had estimated that Class I roads were realizing "about $300 millions a year" from "increases allowed in passenger, mail, compensation for transporting express, and other operating revenues." Inquiry this week at the commission's Bureau of Transport Economics and Statistics met with a refusal "at this time" to give a breakdown of the $300 million which would show how much was included for each of the increases listed.

However, a total of approximately $300 million can be built up if there be included the full amount of express-rate increases, which, of course, are turned over to the railroads only in part. On that basis, there would be passenger-fare increases amounting to approximately $96 million a year; the interim mail-pay increase calculated to yield about $35 million a year; additional annual revenues of about $15 million resulting from increases in water-competitive transcontinental rates and the No. 28300 proceeding's general class-rate adjustment which became effective in August, 1947; and three express-rate increases with an aggregate annual-basis yield of about $150 million. In 1946, only about 25 per cent of the Railway Express Agency's gross revenue was turned over to the railroads in express-privilege payments.



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The new building, a one-story structure 45 ft. by 86 ft. in size, has a reinforced concrete frame faced with brick at the sides and rear. The front, facing the street, is built of Park City quartzite sandstone, a natural product that is predominantly pink and yellow, contrasting pleasantly with the colors of other buildings in the neighborhood. The facade of the structure is dominated by a sign tower which is designed to project out from the property line in such a manner as to be clearly visible from both directions.

The interior walls are of concrete-block construction. Since, at the time of construction, plasterers were not available, the concrete blocks were carefully pointed up and painted an ivory color. Similarly, in the toilet rooms the concrete blocks were enameled, forming a rough surface difficult to deface with pencil marks. The ceiling is constructed of accoustical tile board. The benches, ticket counters, news stand and interior trim are all of bleached birch, a light-colored wood which contributes a cheerful aspect to the interior.

The building is heated by a gas furnace with a forced-air overhead duct system cross connected to air-washer coolers in the roof for summer cooling. The air enters the building through diffusers in the ceiling, the same diffusers being used for both heating and cooling.

gine and ask the foreman to telephone. This procedure was slow and uncertain. In most cases the yardmaster used his personal automobile to hunt for the switch engine and deliver the changes in instructions. While the yardmaster was thus employed, other duties were neglected.

In one case a contractor asked that a car of cement be spotted on a designated team track, but, by mistake, he went to a different team track. Not finding his cement, he telephoned the yardmaster who likewise could not understand where the cement was. A quick call by radio to the crew revealed that the car was in the correct place. Accordingly, the yardmaster telephoned the contractor and he was soon busy unloading his cement.

Time Savings

On another occasion the Neuhoff Packing Company was expecting two cars of hogs concerning which no one knew the whereabouts. A connecting line transfer clerk informed the Katy yard office that he had the two cars of hogs, but that the Katy transfer engine had gone. By using the radio, the yardmaster called the engine and gave instructions to go back for the cars. The radio was effective in saving mileage for the switch engine and in saving at least three hours in delivering the two cars to the consignee.

One morning after a switcher had left the yard, the U. S. Rubber Company telephoned the yardmaster that nine loads which were hanging out off spot should be switched. By using the radio to call the switcher at Hudnall area, proper instructions were given to the crew, with the result that U. S. Rubber was able to unload three cars a day earlier than expected. In the middle of the forenoon one day, the Kroehlers Company called the yard office requesting an empty 50-ft. box car for loading that afternoon. Not having such a car in the yard, the yardmaster put out a call to all the six engines in the outlying areas. As a result, a 50-ft. car was located and spotted at Kroehlers by 2 p.m.

According to instructions from a consignee, a car had been set out on a track in the Love Field area. Later in the day, the consignee telephoned that he had changed his mind and now wanted the car moved at once to a spur about two miles east. The yardmaster used the radio to call the switch engine and the car was moved promptly. This saved 24 hr. for the consignee for a 12-mi. trip for a switch engine and crew. On a recent day, a foreign-line freight train was derailed in South Dallas, blocking the Katy main track, about 15 min. prior to the scheduled time of a Katy passenger train from San Antonio to St. Louis. The yardmaster used the radio to instruct a switch crew to clear a nearby switching lead and yard track as soon as possible. Thus the passenger train was routed around the derailment with the loss of only a few minutes where otherwise considerable time would have been wasted.

As applying to the engine which works in the yard classifying cars and making up trains, the radio is used frequently every day to pass information and changes in instructions between the yardmaster and the crew. Previously, when any questions arose, the switching was delayed until the yardmaster could walk down through the yard. Now many of these minor problems are settled quickly by a brief conversation on the radio.

When the switchers from the outlying industrial areas are started to the yard, the yardmaster uses the radio to tell the crews the numbers of the yard tracks on which they are to enter. This saves time and places the cars where they can be switched to best advantage. Thus the radio is often the means of expediting yard operations so that cars can be placed in departing trains when otherwise they might have been left behind. On several occasions the radio has been an aid in making minor repairs to cars and thus getting trains out on time when otherwise they would have been delayed.

The radio is useful day after day in preventing delays, expediting yard operations and in serving shippers and consignees better than would otherwise be possible. An interesting fact is that no two of the instances in which the radio is a benefit are identical, and new uses come to notice almost every day. The crews are in favor of the radio and cooperate in its use, not only because it saves them work and "shoe leather," but, as one foreman expressed it, "We are proud to aid our railroad in rendering a modern and improved service to shippers."

The examples cited of benefits accomplished by the radio were picked at random from a log book kept by a clerk in the yardmaster's office. This record was started so that the operating officers and executives of the Katy can determine whether these benefits, over a period of years, will justify the cost of the radio project, which was approximately $13,500. Evidently the "score" to date is favorable because consideration is now being given to similar projects in yards at Kansas City, Mo., and Denison, Tex.

The Apparatus Used

The equipments for this radio project was furnished by Bendix. The communication unit consists of a transmitter and receiver, built as a single unit. This same type of equipment is used on the locomotives and the fixed station. The fixed radio station sending-receiving equipment is in a housing at the base of a 104-ft. steel floodlight tower, located just west of McKinney avenue in the yard, the antenna being on top this tower. This radio equipment at the floodlight tower is connected to a remote-control unit consisting of amplifier, loud-speaker and microphone, located in the yardmaster's office, which is about 300 ft. away.

On each locomotive the transmitter-receiver set is mounted on the engine house just forward of the cab, and the radio control panel is mounted on the front wall near the engine controls. The loud-speaker is on the headboard, and the microphone is in a rubber hangar near the control panel. The range of operation of the radio between the fixed station and locomotives is about 4 mi.

This radio project was planned and installed by Katy forces, under the direction of H. Krattiger, superintendent of communications, and R. C. Johnson, telegraph and telephone supervisor. The use of the system was planned and is under the direction of C. A. Birge, Jr., district superintendent, and W. W. Nelms, yardmaster.

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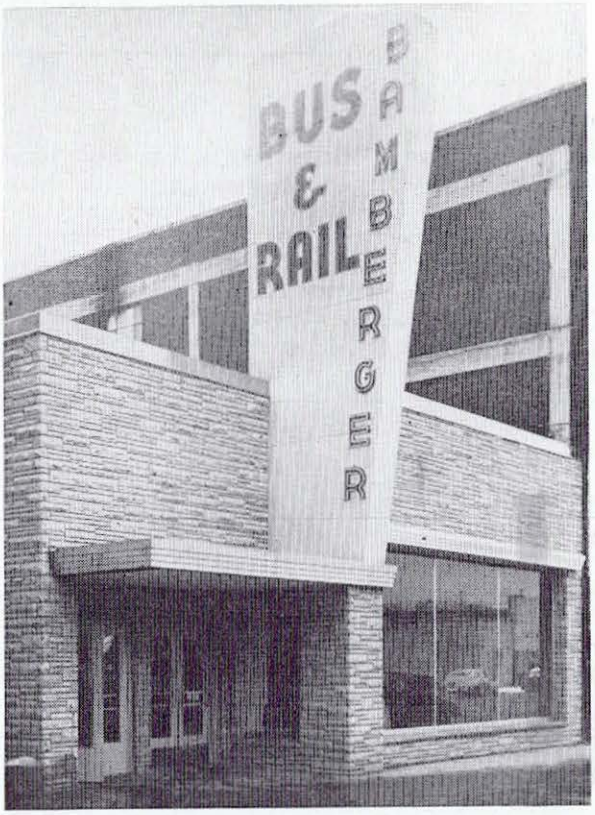

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RADIO EXPEDITES SWITCHER SERVICE

Experience on the Katy with two-way communication between yardmaster's office and seven switch engines in a large industrial area in Dallas demonstrates better overall economy and improved service to shippers

As a means of expediting service to shippers in Dallas, Tex., the Missouri-Kansas-Texas has installed two-way radio telephone communication between the yardmaster's office and seven Diesel-electric switch engines which are used not only in the yard, but also in interchange service and for serving warehouses, industries and freighthouses in a district which extends 14 mi. through the city and suburbs. This radio project, which is the first permanent installation of its kind in Texas, has now been in service several months, and the benefits anticipated, in both improved service and economy, have been fully realized.

The foreman or engineman of each switch crew can talk with the yardmaster

The Katy freight yard in Dallas is located just east of the valley of the Trinity river, in the general vicinity of McKinney avenue, as indicated by the letter "A" on the accompanying sketch. This yard is near numerous warehouses and freighthouses which are close to the principal business district of the city, and also near several mills, factories and packing plants on that side of the valley. The Katy exchanges cars with the Texas & Pacific at a point just south of the Katy yard, and with the Texas Electric at Atkins, 5.6 mi. north of the yard on the Dallas division. At South Dallas ("B" on the sketch), the Katy interchanges with the Frisco, the Cotton Belt, the Santa Fe, the Louisiana & Arkansas, the Southern Pacific, the Rock Island and the Fort Worth & Denver City. Also in this area the Katy serves Swift & Co., Proctor & Gamble and National Lead. Oher industries, coal yards and spurs are located all along the Katy tracks to the south for four miles.

Development on the Denton Line

In addition to the main line north from Dallas, via Denison, Tex., to Kansas City and St. Louis, the Katy has a secondary line which extends from Dallas west to Denton, Tex., where it connects with the Katy's line between Fort Worth and Denison. In the northwest section of Dallas, this Denton branch ascends from the river valley to high ground and passes through three sections which, during the past few years, have developed into modern industrial areas. The section marked "C" on the accompanying sketch, known as the Hudnall area, includes approximately 100 acres in which branch offices, warehouses and factories have been constructed by various industries such as Standard Brands, Inc., Vitalic Battery Company, Mosher Steel Company and Canada Dry Ginger Ale Company. The Airlawn industrial district, at "D" on the sketch, covers roughly 200 acres and includes warehouses and factories of such companies as Firestone Tire & Rubber, Eastman Kodak, General Electric, U. S. Rubber, General Motors, Coca-Cola and the Minneapolis-Moline Implement Company. When its help is desired the industrial department of the Katy arranges for the real estate and the construction of industrial buildings for use on long-term leases.

Further west is a section of about 50 acres in the general vicinity of Love Field Municipal Airport,

marked "E" on the diagram, and known as Love Field industrial area. In this area, warehouses and branch factories have been built by various companies including Willard Storage Battery, Gregory-Robinson-Speas, Inc., and Dallas Textile Mills.

The road trains terminate in the yard near McKinney avenue, location "A" on the sketch. Four through freight trains, one local and a Denton division train arrive daily and the same number of trains are dispatched. About 150 cars are received inbound daily on road trains and approximately the same number are dispatched. Every day an average of 250 cars are delivered to and picked up from industries and handled in interchange with other railroads. All switching in this yard, as well as the serving of the industrial areas and interchange connections, is handled by crews on the seven Diesel-electric switch engines equipped with radio. These locomotives are available continuously 24 hr. every day, except for inspection periods of 4 hr. once a week and 8 hr. once a month. Each crew includes an engineman, a fireman, a switch foreman and two helpers. Ordinarily, five switch crews are on duty each trick, with an extra crew on the day trick if required.

One engine is in service at all times in the yard, to break up trains and classify cars into cuts for the different industrial areas. A second engine is assigned to handle the interchange of cars with other railroads and to serve industries in the vicinity of South Dallas. A third serves industries and warehouses in Dallas and in the Hudnall area, and still another works the Airlawn and Love Field areas.

How the Radio Is Used

The radio sets in the seven locomotives and in the yardmaster's office are all tuned to the same frequency so that the loud-speakers reproduce all the calls and conversations. When the yardmaster wants to call an engine, he picks up his transmitter, pushes the press-to-talk switch and speaks. For example: "KPWY calling KPFE Engine 1006." Anyone in the cab of the locomotive, such as the engineman, can answer, as for example: "Engine 1006. Go ahead KPWY." Then the conversation ensues. As a general rule, if the foreman is on or near the locomotive, he talks with the yardmaster. When the conversation is finished, the last person speaking ends his statement with "Over." This is a cue to any other crew that may be waiting to make a call.

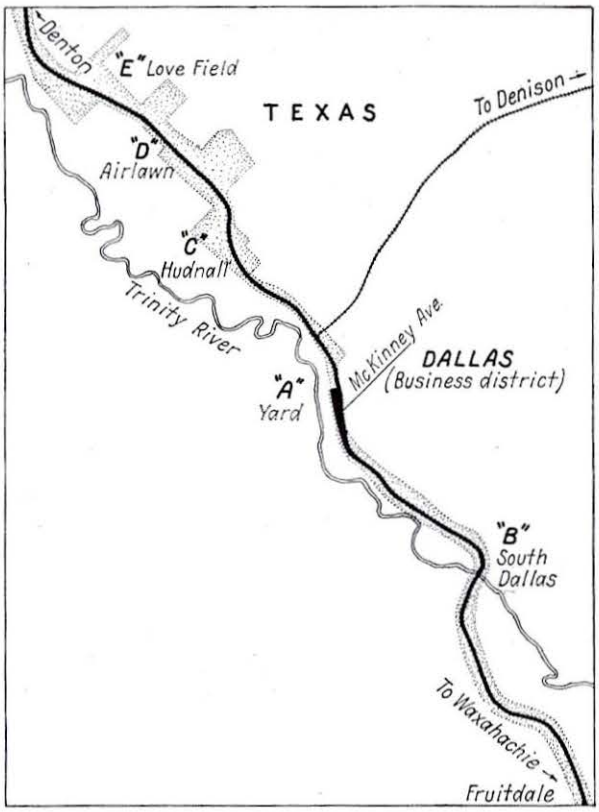
Examples of Benefits

Among the various industries served by the Katy, requirements are changing constantly with respect to cars which should be spotted or pulled. For example, on a recent day, Standard Brands completed the unloading of a car of molasses and wanted another car spotted for unloading as soon as possible. Standard Brands telephoned its request to the yardmaster. Then, by radio, the yardmaster called the switch engine which was working in that district, and the cars were soon moved as requested. In another instance, the Massey-Harris Company telephoned the yardmaster that it wanted a car moved from door No. 4 to No. 2 at a certain warehouse. By using the radio, the yardmaster passed on these instructions to the switch crew in time for the change to be made while it was in that vicinity.

Previously, under similar circumstances, without the radio, the yardmaster would telephone to various industries requesting them to look for his switch en-

The yardmaster in his office uses the radio to talk with the crews of the seven switchers

Map showing general locations of switching and industrial areas on the M.-K.-T. in and about Dallas, Tex.



gine and ask the foreman to telephone. This procedure was slow and uncertain. In most cases the yardmaster used his personal automobile to hunt for the switch engine and deliver the changes in instructions. While the yardmaster was thus employed, other duties were neglected.

In one case a contractor asked that a car of cement be spotted on a designated team track, but, by mistake, he went to a different team track. Not finding his cement, he telephoned the yardmaster who likewise could not understand where the cement was. A quick call by radio to the crew revealed that the car was in the correct place. Accordingly, the yardmaster telephoned the contractor and he was soon busy unloading his cement.

Time Savings

On another occasion the Neuhoff Packing Company was expecting two cars of hogs concerning which no one knew the whereabouts. A connecting line transfer clerk informed the Katy yard office that he had the two cars of hogs, but that the Katy transfer engine had gone. By using the radio, the yardmaster called the engine and gave instructions to go back for the cars. The radio was effective in saving mileage for the switch engine and in saving at least three hours in delivering the two cars to the consignee.

One morning after a switcher had left the yard, the U. S. Rubber Company telephoned the yardmaster that nine loads which were hanging out off spot should be switched. By using the radio to call the switcher at Hudnall area, proper instructions were given to the crew, with the result that U. S. Rubber was able to unload three cars a day earlier than expected. In the middle of the forenoon one day, the Kroehlers Company called the yard office requesting an empty 50-ft. box car for loading that afternoon. Not having such a car in the yard, the yardmaster put out a call to all the six engines in the outlying areas. As a result, a 50-ft. car was located and spotted at Kroehlers by 2 p.m.

According to instructions from a consignee, a car had been set out on a track in the Love Field area. Later in the day, the consignee telephoned that he had changed his mind and now wanted the car moved at once to a spur about two miles east. The yardmaster used the radio to call the switch engine and the car was moved promptly. This saved 24 hr. for the consignee for a 12-mi. trip for a switch engine and crew. On a recent day, a foreign-line freight train was derailed in South Dallas, blocking the Katy main track, about 15 min. prior to the scheduled time of a Katy passenger train from San Antonio to St. Louis. The yardmaster used the radio to instruct a switch crew to clear a nearby switching lead and yard track as soon as possible. Thus the passenger train was routed around the derailment with the loss of only a few minutes where otherwise considerable time would have been wasted.

As applying to the engine which works in the yard classifying cars and making up trains, the radio is used frequently every day to pass information and changes in instructions between the yardmaster and the crew. Previously, when any questions arose, the switching was delayed until the yardmaster could walk down through the yard. Now many of these minor problems are settled quickly by a brief conversation on the radio.

When the switchers from the outlying industrial areas are started to the yard, the yardmaster uses the radio to tell the crews the numbers of the yard tracks on which they are to enter. This saves time and places the cars where they can be switched to best advantage. Thus the radio is often the means of expediting yard operations so that cars can be placed in departing trains when otherwise they might have been left behind. On several occasions the radio has been an aid in making minor repairs to cars and thus getting trains out on time when otherwise they would have been delayed.

The radio is useful day after day in preventing delays, expediting yard operations and in serving shippers and consignees better than would otherwise be possible. An interesting fact is that no two of the instances in which the radio is a benefit are identical, and new uses come to notice almost every day. The crews are in favor of the radio and cooperate in its use, not only because it saves them work and "shoe leather," but, as one foreman expressed it, "We are proud to aid our railroad in rendering a modern and improved service to shippers."

The examples cited of benefits accomplished by the radio were picked at random from a log book kept by a clerk in the yardmaster's office. This record was started so that the operating officers and executives of the Katy can determine whether these benefits, over a period of years, will justify the cost of the radio project, which was approximately $13,500. Evidently the "score" to date is favorable because consideration is now being given to similar projects in yards at Kansas City, Mo., and Denison, Tex.

The Apparatus Used

The equipments for this radio project was furnished by Bendix. The communication unit consists of a transmitter and receiver, built as a single unit. This same type of equipment is used on the locomotives and the fixed station. The fixed radio station sending-receiving equipment is in a housing at the base of a 104-ft. steel floodlight tower, located just west of McKinney avenue in the yard, the antenna being on top this tower. This radio equipment at the floodlight tower is connected to a remote-control unit consisting of amplifier, loud-speaker and microphone, located in the yardmaster's office, which is about 300 ft. away.

On each locomotive the transmitter-receiver set is mounted on the engine house just forward of the cab, and the radio control panel is mounted on the front wall near the engine controls. The loud-speaker is on the headboard, and the microphone is in a rubber hangar near the control panel. The range of operation of the radio between the fixed station and locomotives is about 4 mi.

This radio project was planned and installed by Katy forces, under the direction of H. Krattiger, superintendent of communications, and R. C. Johnson, telegraph and telephone supervisor. The use of the system was planned and is under the direction of C. A. Birge, Jr., district superintendent, and W. W. Nelms, yardmaster.

GENERAL NEWS

Talks Continue; New Strike Date Is Set

Two op unions order May 11 walkout; Mediation Board intervenes

The 30-day "cooling off" period during which the engineers, firemen and switchmen awaited legal opportunity to set a strike date, following their refusal to accept the recommendations of a Presidential emergency board, expired at midnight April 26. Negotiations between the railroads and the brotherhoods concerning the unions' wages and rule demands were broken off at Chicago at 11:15 p.m. on April 27, and at 4:30 p.m. on April 28 it was announced that a nationwide railroad strike had been called for May 11, at 6 a.m., by the Brotherhood of Locomotive Firemen & Enginemen and the Switchmen's Union of North America.

As this issue of *Railway Age* went to press, the Brotherhood of Locomotive Engineers had not concurred on the strike date set by the other two unions J. P. Shields, first assistant grand chief engineer of the B. of L. E., stated that his union had "not made up its mind if and when a strike date will be set."

Frank P. Douglass, chairman of the National Mediation Board, arrived in Chicago on April 29, to renew negotiations toward a settlement of the dispute. He scheduled a meeting with union representatives for 10 a.m. that day in the latter's Congress Hotel headquarters, and it was understood that carrier representatives were standing by to participate in further discussions. The intervention of the board was indicated by the following statement issued by it in Washington, D. C., on April 28:

"The National Mediation Board has today been advised by the representatives of all of the Class I railroads in the United States and the Brotherhood of Locomotive Engineers, Brotherhood of Locomotive Firemen & Enginemen and the Switchmen's Union of North America that their efforts to amicably adjust the matters in dispute between them through direct negotiations have reached an impasse. This failure to reach an agreement represents a serious threat to the economy of the nation in that a stoppage of all rail transportation in the country may follow.

"The Railway Labor Act represents the only existing legislation which provides procedures for adjustment of disputes in the railroad industry. The core of this statute is genuine collective bargaining concerning rates of pay and changes in the working conditions without ultimate sanctions or restraints on either party. It has been successful in maintaining peace in the railroad industry since 1926 and the National Mediation Board sees no reason why the Railway Labor Act cannot be made effective to adjust this present dispute. Accordingly, the board has proffered its services to both sides and agreed to meet the parties in Chicago on April 29 in an effort to mediate their differences.

"All other procedures under the Railway Labor Act to settle this dispute have heretofore been exhausted. Under the circumstances the conferences to be conducted by the board must succeed."

The strike call stems from the request of the brotherhoods for a 30 per cent increase in wages and 25 changes in working rules. These three brotherhoods withdrew from the concerted movement of the "big five" operating unions November 14, 1947, when the Brotherhood of Railroad Trainmen and the Order of Railway Conductors reached an amicable settlement of their demands with the carriers based on a 15½-cent hourly wage increase and changes in four working rules. The engineers, firemen and switchmen declined a like offer and refused to submit their case to arbitration.

When a strike date first was set, President Truman appointed an emergency "fact-finding" board as provided by the Railway Labor Act. This board, on March 27, recommended that the three hold-out unions accept a 15½-cent hourly wage increase and specified working rule changes favorable to them. While adherence to the board's recommendation will impose a hardship upon the carriers, they, nevertheless, promptly agreed to abide by those findings in keeping with the spirit of the Railway Labor Act. The unions, however, de-

R. L. Williams (left), president of the Chicago & North Western, on April 20 received, on behalf of the railroad, an award of the National Safety Council, which cited the North Western for its safety activities. (*Railway Age* for April 24, page 69). Ned H. Dearborn, president of the National Safety Council, is shown making the presentation

cleared that the board's recommendations were not satisfactory to them, and, while they agreed to negotiate further with the carriers, they stated, at that time, that the strike date would be set promptly after April 27 if no accord was reached.

South Buffalo Free of Commodities Clause

Supreme Court reaffirms ruling of its 1936 E.J.&E. decision

The United States Supreme Court has ruled, in a 5-to-4 decision, that the South Buffalo, a subsidiary of the Bethlehem Steel Corporation, does not violate the Interstate Commerce Act's commodities clause by transporting commodities manufactured by another Bethlehem Corporation subsidiary, the Bethlehem Steel Company. The decision reaffirmed the court's 1936 ruling in a similar case involving the Elgin, Joliet & Eastern, a subsidiary of the United States Steel Corporation; and said that, so long as Congress does not decide to change the law, the rule of the E.J.&E. case (298 U.S.492) makes South Buffalo's operations lawful.

The Principle Stated—That rule, as the present decision summarized it, is "that the prohibition against a railroad company transporting any commodity which it owns or in which it has an interest, except for its own use, does not prevent it from transporting commodities of a corporation whose stock is wholly owned by a holding company which also owns all of the stock of the railway, unless the control of the railway is so exercised as to make it the *alter ego* of the holding company." The decision was announced by Justice Jackson, while the dissenting opinion was written by Justice Rutledge with whom Justices Black, Murphy and Douglas agreed.

South Buffalo serves the Bethlehem Company's plant at Lackawanna, N. Y., deriving about 70 per cent of its revenues from such services; but it also renders terminal switching services to 27 unaffiliated industries. The complaint against it was brought by the federal government, and the case came to the Supreme Court on the government's direct appeal from a federal district court opinion which is now affirmed.

Stating that if the *Elgin* case were before it "as a case of first impression," its doctrine "might not now be approved," the Supreme Court went on to find that Congress, since that decision, had considered and rejected proposed I.C.Act amendments which would have insured application of the commodities clause to situations like that of the E.J.& E. "The government," the court said, "now asks us to apply the unchanged language as if Congress had adopted the proposal which it rejected as 'far too drastic.'"

Up to Congress—It was also pointed out that, after the E.J.& E. decision, Bethlehem revised its relationship with South Buffalo "to comply, as it was advised, with the conditions under which the court had found the statute inapplicable to United States Steel." That compliance was thus achieved is indicated by the court's finding that Bethlehem did not "disregard in either the legal or economic sense, the separate entity of its subsidiary or treat it as its own *alter ego*." This, the court concluded, is "sufficient" under the *Elgin* case "and until Congress shall otherwise decide."

The dissenting opinion characterized the proceeding as "another case where the court saddles Congress with the load of correcting its own emasculation of a statute, by drawing from Congress' failure explicity to overrule it, the unjustified inference that Congress approves the mistake." The dissenters also complained that the majority "misreads" the legislative history of proposals to amend the commodities clause in the light of the E.J.& E. decision. They found in that history indications that no legislation was considered necessary "if no more were intended than a reversal of the *Elgin* case," for that matter could be left to the court. The proposals rejected by Congress as "far too drastic" were identified by the dissenters as those which would have extended the commodities clause to all types of carriers other than air carriers. "Congress," the dissent concluded, "should not again be required to reenact what it has once provided for, only to have its mandate nullified in part by this court's misconstruction."

Sees Freight Traffic Following '47 Trend

Kendall expects like pattern to form as deferred shipments are moved

The "unfortunate experiences" which occurred with respect to freight car loadings during the first 15 weeks of 1948, during which time loadings decreased 6.6 per cent under the corresponding 1947 period, may "well result in making the pattern of railroad transportation in the remaining months of 1948 resemble that of the corresponding months of 1947," it is asserted by Warren C. Kendall, chairman of the Car Service Division of the Association of American Railroads, in his latest analysis of the "National Transportation Situation."

According to Mr. Kendall, the decrease in carloadings this year is the combined result of circumstances over which no one interested in transportation has control. He attributed the decreased loadings to the prolonged winter weather in New England and the East, which, he said, retarded both industrial and railroad operations; the suspension of coal mining operations; and the failure of some agricultural commodities, particularly grain and grain products, to move at a time when transportation is and has been plentiful. With respect to the latter, he pointed out that grain and grain products loadings for the first 15 weeks of 1948 were 25 per cent under the corresponding period of 1947 with the result that, as of April 1, the wheat stocks on farms were 116,682,000 bushels more than on the same date last year.

Hoped for Even Traffic Flow—"It had been hoped," Mr. Kendall said, "that with the increasing number of new cars being received in the latter months of 1947 and throughout 1948, it would be possible to carry this year's transportation load with less serious car shortages than were experienced in 1947. That prognostication was based on an even distribution of traffic during the year, subject, of course, to season variations. In view of the deferred movements to date this year, everyone concerned—railroads, shippers and receivers—are earnestly urged to put forth increased effort for efficient utilization of the rail transportation machine and avoidance of delay to freight cars during the months ahead."

In his discussion of the hopper car supply, Mr. Kendall noted that revenue coal loadings, as of April 10, were 332,000 cars less than those of the same 1947 period. He went on to say that a meeting of anticipated 1948 requirements now calls for coal loadings during the remaining 37 weeks of this year at a rate exceeding 1947 loadings by approximately 9,000 cars per week.

With respect to iron ore, the C.S.D. chairman said that, although March 1 stocks are down compared with the same date last year, the movement from the head of the Lakes got off to an early start in 1948. It will be necessary to concentrate on the ore movement, he added, if the revised program of about 85,000,000 tons is to be shipped during the season of open navigation.

Gondolas Most Critical—Mr. Kendall predicted that, with the resumption of coal production, there is every indication that the gondola car supply will be "our No. 1 problem" for the balance of the year. Quota orders requiring western railroads to return Eastern-Alleghany ownership gondolas to the home roads will doubtless be reinstated in the near future, he said, in order to protect adequately the heavy movement of steel products from Pittsburgh-Cleveland-Buffalo area to western destinations. He stressed that renewed emphasis is being laid on the importance of the best possible observance of Car Service Rules in the handling of gondolas so that the supply of home cars on owning roads will be properly built up to meet shippers' needs. At the same time, Mr. Kendall reported that de-

mands for flat cars and covered hoppers continue to be heavy.

Another result of the resumption of coal production and the lifting of restrictions on freight train operations has been an increase in the requirements for high-grade box cars, the supply of which, Mr. Kendall said, is not sufficient to meet all current requirements. He added that demands for box cars are expected to increase rapidly "from now on" in view of several factors, foremost of which is the Department of Agriculture's crop report of April 1 in which a winter wheat production of 861,000,000 bushels, an increase of 22,000,000 bushels above the December 1, 1947, forecast, was predicted.

Coal Strike Delayed Empties—Mr. Kendall stated that an increase in the flow of empty box cars to areas where demands will be heaviest was delayed by the reduction in train operations resulting from the coal strike. However, he said, programs are now in effect to build up the supply of box cars on needy roads, adding that "there will be no relaxation of efforts to insure they are fully effective in order to lessen to the maximum extent practicable the impact of the heavy requirements anticipated."

As for other types of closed cars, Mr. Kendall reported that (1) demands for ventilated box cars will increase sharply in May when the watermelon shipping season gets under way in the Southeast; (2) the supply of auto device and parts cars is sufficient to protect current requirements satisfactorily; (3) the spring movement of livestock from the Southwest has sharply increased the demands for single-deck stock cars; and (4) the refrigerator car supply has been satisfactory for the past month, with all orders throughout the country being filled.

With respect to new equipment, Mr. Kendall observed that the production of freight cars in March totaled 9,302, the highest since last December. The anticipation that the 10,000-car goal may be reached in April, he said, is enhanced by the fact that the production in the last half of March totaled 5,243 cars. Figures from the American Railway Car Institute for the first half of April, he added, show deliveries to all railroads and all car lines of 4,111 new cars during the first half of last month, a slight gain over the comparable period of March.

"While new cars reported installed by Class I roads and railroad controlled refrigerator car lines totaled only 7,252 there was net gain in ownership during March of 1,403, retirements totaling 5,849," Mr. Kendall stated. "Retirements were heavier than any month since October. However, this makes the fifth consecutive month when production of new cars has exceeded retirements. There was a net gain in this period of 7,858 box and 10,157 hoppers, with some offsetting net losses in gondola and refrigerator cars. . . . The heavy orders placed during the first half of April . . . lead to the expectation that the April 30 report . . . will show cars on order in excess of the previous high record made in 1923."

Among other things, Mr. Kendall's report disclosed that the average turnaround time of freight cars in March was 15.80 days, as compared with 15.27 days in February; and the average detention of freight cars over the free time of 48 hours in March was 17.8 per cent, as compared with 16.02 per cent in February. The C.S.D. chairman also revealed that the return of cars to home lines during March improved substantially.

All types of cars, he said, show an increase of 141,297 at home, or 20 per cent, with the number of box cars on home lines increasing 22,424, or 15 per cent. Such returns, he added, brought the percentage for all roads of home box cars on line to 23.4, and all cars to 46.8, both figures being the highest reported since June, 1946.

Steel Allocation Plan Generally Accepted

As of April 28 the Department of Commerce's Office of Industry Cooperation had received notices of compliance from 116 out of 134 prospective railroad participants in the new "voluntary" agreement for the allocation of steel for use in the freight car building and repair program. Compliances received from the railroads now include those of all four roads which expressed opposition to the plan at O.I.C. hearings in March—the Atchison, Topeka & Santa Fe, the Chicago, Burlington & Quincy, the Chicago, Milwaukee, St. Paul & Pacific and Chicago, Rock Island & Pacific.

Meanwhile, all interested contract car builders, private car lines and steel producers have filed notices of compliance, and such compliances have been coming in at a "satisfactory rate" from prospective participants among component parts manufacturers.

A joint O.I.C. and Office of Defense Transportation announcement of April 29 revealed that operations under the new program got started this week with allocations of 750,000 tons of steel for this year's third quarter. This was described as an amount similar to recent quarterly allotments under the former allocation program which was supervised by O.D.T.

C.A.B. Prescribes Minimum Rates For Air Carriers of Freight

Minimum rates for the transportation of freight by air of 16 cents per ton-mile for the first 1,000 ton-miles in any one shipment and 13 cents per ton-mile for all ton-miles in excess of 1,000 in any one shipment have been prescribed by the Civil Aeronautics Board. The board said it may permit modification of the rates upon application or on its own initiative.

The board's action was the culmination of a hearing on air freight rates now in effect and proposed freight rates which it suspended last October. The board said that the lower rates under investigation would endanger the "sound development" of the air freight industry and were in conflict with the congressional declaration of policy against destructive competitive practices.

A.S.M.E. Railroad Division Programs Semi-Annual Meeting

In conjunction with the semi-annual meeting of the American Society of Mechanical Engineers at the Hotel Schroeder, Milwaukee, Wis., May 31 to June 4, the Railroad Division of the society will hold joint sessions with the Machine Design and Gas Turbine Power divisions on June 1, an all-committee meeting on June 2, and an all-day session on passenger-car subjects on June 3.

Details of the program are as follows:

Tuesday, June 1

9:30 a. m.—Joint session with Machine Design Division—A. A. R. Standard Car Coupler, by H. L. Spence, National Malleable & Steel Castings Co., Cleveland, Ohio.

2:30 p. m.—Joint session with Gas Turbine Power Division—Gas Turbine for a Locomotive Power Plant, by W. B. Tucker, Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Wednesday, June 2

1:30 p. m.—Railroad Division All-Committee Meeting.

7:00 p. m.—Society Dinner.

Thursday, June 3

9:30 a. m.—Railroad Division technical meeting—Thermal Environment of Railroad Passenger Cars, by K. A. Browne, research consultant, Chesapeake & Ohio, Cleveland, Ohio—Visual Passenger Comfort, by Brooks Stevens, industrial designer, Brooks Stevens Associates, Milwaukee, Wis.

2:30 p. m.—Afternoon Session—Selling Passenger Service, by J. W. Barriger, president, Chicago, Indianapolis & Louisville—Decibel Level, by W. A. Jack, accoustical consultant, Johns-Mansville Company, New York—Truck-Riding Comfort, by K. F. Nystrom, chief mechanical officer, Chicago, Milwaukee, St. Paul & Pacific, Milwaukee, Wis.

Representation of Employees

Because less than a majority of the eligible employees participated and cast valid ballots in the election, the National Mediation Board has found no basis for certification and has dismissed an application wherein a local federation of the Railway Employes' Department, American Federation of Labor, sought to represent mechanical department foremen employed by the Denver & Rio Grande Western. As a result of the board's action, the employees involved remain without representation.

The board's decision resulted from a March 31 election, in which only 46 of the 121 employees eligible to vote participated. The A.F. of L. union received 44 votes. That election, the second involving D. & R.G. mechanical department foremen in approximately a year, was ordered by the board following an April 4, 1947, election, in which no certification was made for the same reason.

In its discussion of the latter referen-

dum, the N.M.B. said that some of the 19 ballots declared void showed an attempt by the voter to express his choice of representation under the Railway Labor Act. The parties, it said, were thereupon advised that, under such circumstances, the board was of the opinion that the employees should be afforded another opportunity to choose a representative, and directed that another election be held.

The N.M.B., meanwhile, has certified the Order of Railway Conductors of America to continue to represent yardmasters employed by the Great Northern. The O. of R.C. defeated the challenging Railroad Yardmasters of America, 63 to 61, in a run-off election, which had been ordered by the board following the result of an earlier election in which no organization received a majority of the valid ballots cast.

The board also has certified the Sheet Metal Workers International Association, A. F. of L., to represent sheet metal workers, including their helpers and apprentices, employed by the Peoria & Pekin Union. These employees formerly had not been represented by any organization or individual.

East-West Through Car Operations Curtailed

With the schedule changes effective April 25, on inauguration of Daylight Saving Time, through coaches between New York and points in Texas were dropped from the make-up of the "Sunshine Special," operated jointly by the Missouri Pacific and the Pennsylvania. Through sleeping car service between New York and Mexico City, New York and El Paso, Tex., and Fort Worth and Washington, D. C., on the "Sunshine Special" were also discontinued. At the same time the schedule of the "Sunshine" eastbound was quickened by 30 min. Transcontinental sleeping car service between Washington and San Francisco, Cal., via the Pennsylvania, Chicago & North Western, Union Pacific and Southern Pacific was discontinued at the same time.

Liberalized Retirement Act Benefits Proposed in House

A bill to amend the Railroad Retirement Act of 1937 so as to provide annuities of half pay for persons who have completed 30 years of railroad service and are 60 years of age has been introduced in the House by Representative Clason, Republican of Massachusetts. The bill, introduced at the request of T. G. Stack, president of the National Railroad Pension Forum, would also change the present financial system of the act from a so-called "funded" plan to a "pay-as-you-go" sliding-scale tax-rate plan.

In this respect, the forum pointed out that the proposed measure would reduce the present tax rate for employee and employer from 5¾ per cent to 3 per cent of taxable payroll and would be based on maintaining a minimum balance in the retirement fund of $700,000,000, or more. Should this balance drop, the rate would be increased ½ per cent for each $50,000,000 the fund decreases. If the fund should drop to $500,000,000, the tax rate would increase to 5 per cent.

Another bill, H.R.6319, to amend the same act, has been introduced by Representative Buchanan, Democrat of Pennsylvania. Mr. Buchanan's measure provides that individuals who have completed at least 35 years of railroad service may retire on a full annuity whatever their age.

R. E. A. Proposes Lower Rates For New York-to-West Retail Goods

A schedule of lower express rates for the transportation of specified retail merchandise from New York to 23 west coast points has been filed by the Railway Express Agency with the Interstate Commerce Commission to become effective on May 20. The new rates will apply to shipments weighing 750 lb. and over, from one shipper to one receiver, for such articles as wearing apparel, leather goods, phonograph records, textiles, toys and many other items sold in large quantities by retail stores.

The new rates are in three weight groups, the first ranging from 750 to 999 lb., the second from 1,000 to 1,499 lb. and the third 1,500 lb. and over. At present the charge is $15.84 per 100 lb. between New York and San Francisco, Cal., while the proposed rates would be $14.25 per 100 lb. for group one, $13.75 for group two and $12.25 for group three.

A.A.R. Plans to Hold Public Relations Conferences

The first of a series of one-day regional conferences on relations of the railroad industry with the public will be held May 12 at the Ansley Hotel, Atlanta, Ga., under the sponsorship of the Association of American Railroads. Executives of A.A.R. member roads were advised of plans for the conference in an April 15 letter from President William T. Faricy.

Tentative arrangements have also been made for similar conferences to be held later at Dallas, Tex., San Francisco, Cal., St. Paul, Minn., St. Louis, Mo., Chicago and New York. The series of conferences is the outgrowth of one held in Washington, D. C., last year.

Mr. Faricy said that the purpose of the conference is to "present the story of what is being done to improve the public relations of the industry, consider what more should be done, and in what manner, and what steps might be taken to increase the interest of railroad men of all departments in bettering our relations with the public."

The A.A.R. president said it is hoped that, in addition to public relations officers and their staffs, the conferences will be attended by railroad officers and key employees of the operating, traffic, law, accounting, treasury, purchases and stores, and other departments of the railroads. "The program," he said, "will be brief and, I believe, will be practical and valuable."

A.S.T.M. Plans June Meeting

To provide for the presentation of several symposiums and numerous technical papers and reports at its 51st annual meeting in Detroit, Mich., the week of June 21, the American Society for Testing Metals has arranged 18 technical sessions extending from Monday through Friday of that week. Exhibits will be in the Book-Cadillac Hotel, which is the main registration headquarters, and auxiliary headquarters will be at the Statler and the Detroit-Leland, where committee meetings and some sessions will also be held.

Alcoa Presents New Film on Research and Development

The Aluminum Company of America introduced its new Technicolor film, "Curiosity Shop," at a special showing at the Hotel Plaza, New York, on April 21. The picture, starring John Litel, June Lockhart and Richard Hogan, tells the story of the part individual initiative plays in the development of improved aluminum products, with most of the action taking place in a college laboratory (one type of "curiosity shop"). In the laboratory Gordon Harkness (Mr. Litel) and Bill McCann (Mr. Hogan) become involved in the development of Bill's television set and they discuss how research and development enter into the creation of new products.

On July 1, 1948, the film will be made available in 16- and 35-mm. prints for club and school showings. Requests should be made to: Motion Picture Department, Aluminum Company of America, 801 Gulf Building, Pittsburgh 19, Pa.; Modern Talking Picture Service, 9 Rockefeller Plaza, New York 20; or Farm Film Foundation, 1731 Eye St., N. W., Washington 6, D. C.

Bills in Congress

Representative Jones, Democrat of Alabama, has introduced H.R. 6236, which would increase from $15,000,000 to $33,000,000 the amount of capital stock authorized to be issued by the government-owned Inland Waterways Corporation, operator of the Federal Barge Lines. The bill would also authorize the appropriation of $18,000,000 to be used by the secretary of the treasury for purchase of the additional stock "upon call from time to time by the secretary of commerce." It further proposes to extend the service of the I.W.C. to the Tennessee and Cumberland rivers and on the Ohio river and

its tributaries above the confluence with the Cumberland. Legislation similar to H.R. 6236 also has been proposed in the Senate.

Two bills designed to repeal the tax on the transportation of property and the tax on the transportation of persons also have been introduced in the House by Representatives MacKinnon and Hand, Republicans of Minnesota and New Jersey, respectively. They are H.R.6196 and H.R.6338.

Refresher Course for R.R. Police

A refresher training course for railroad police and special agents will be held May 3 to 14, inclusive, at the Illinois Central conference room in Chicago. Some 150 police officers are expected to attend the session, which will be similar to that held in Chicago last year. Sponsored by the Chicago Railway Special Agents & Police Association, with the assistance of the Federal Bureau of Investigation, state, city and county police, the course will include, among other subjects, evidence, complaints, finger printing, arrests and investigations.

I. C. "Sunchaser" Derailed

The 13-car Illinois Central "Sunchaser," northbound from Miami, Fla., to Chicago, was derailed 17 miles north of Birmingham, Ala., early on the morning of April 25. Ten of its cars left the rails, the locomotive, baggage car and one Pullman plunging down an embankment. Four other cars clung to its edge. The engineman, fireman, and one passenger were killed and forty-six passengers were hospitalized. The cause of the accident has not been announced.

C. N. J. Commuters Lease Air-Conditioned Coaches

The Central of New Jersey announced on April 24 that as a result of questionnaires distributed on its trains last November two commuter clubs have signed leases for air-conditioned coaches. (See *Railway Age* of April 24, page 69). One group is the long-established Red Bankers club and the other is the newly-formed Westfield Commuters club. The coach of the latter group will operate between Dunellen, N. J., and Jersey City while the former group's coach will run between Bay Head, N. J., and Jersey City. Earl T. Moore, chief executive officer of the road, said several other commuter groups were negotiating for similar arrangements.

The clubs will pay the initial cost of the air-conditioning equipment and its installation on a 15-year amortization basis. The fixed charge will be about $1.53 a person each month if divided among 65 club members, and proportionately less as the number of members is increased. It is estimated, for example, that the monthly cost per person for 65 members for the use of the equipment would amount to an additional $3.30 during the hot weather months with the equipment operating five days a week on the evening homeward trip. On this basis, with the air-conditioning equipment operating during four of the summer months, the average total monthly cost per person for the year with 65 members in the club would be about $2.65 in addition to regular fares.

Freight Car Loadings

Loadings of revenue freight in the week ended April 24 totaled 852,309 cars, the Association of American Railroads announced on April 29. This was 66,641 cars, or 8.5 per cent, above the preceding week, a decrease of 41,403 cars, or 4.6 percent, below the corresponding week last year, and 192,045 cars, or 29.1 percent, above the equivalent 1946 week, when coal loadings were reduced by work stoppages in the mines.

Loading of revenue freight for the week ended April 17 totaled 785,668 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading
For the Week Ended Saturday, April 17

District	1948	1947	1946
Eastern	142,145	165,099	136,920
Allegheny ..	151,923	189,691	124,365
Pocahontas ..	51,318	67,877	21,876
Southern ...	132,646	133,458	117,512
Northwest. ..	122,644	120,870	79,417
Cen. West. ..	117,567	124,903	107,851
Southwest. ..	67,425	63,946	62,902
Tot. West. Dis.	307,636	309,719	250,170
Tot. All Rds.	785,668	865,844	650,843
Commodities:			
Grain & Grain products ..	38,752	48,436	34,396
Livestock ...	14,030	14,039	18,618
Coal	129,931	185,731	29,709
Coke	9,691	14,137	7,083
Forest prods.	41,749	43,100	45,086
Ore	66,333	50,503	12,269
Mdse. l.c.l. ..	109,107	126,456	127,967
Miscel.	376,075	383,442	375,715
April 17 ...	785,668	865,844	650,843
April 10 ...	683,852	757,839	649,298
April 3 ...	661,807	715,159	643,644
March 27 ...	664,375	829,392	809,142
March 20 ...	700,482	844,041	804,606
Cumulative total, 16 weeks ..	11,987,710	12,856,575	11,676,764

In Canada. — Carloadings for the week ended April 17 totaled 74,681 cars as compared with 77,789 cars for the previous week and 72,813 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Tot. Cars Rec'd from Connections
Totals for Canada:		
April 17, 1948	74,681	35,894
April 19, 1947	72,813	37,959
Cumulative totals for Canada:		
April 17, 1948	1,155,889	574,810
April 19, 1947	1,095,746	598,070

Sees Railroad History as Best Illustration of Free Enterprise

The growth of American railroads is probably the best illustration of the operation of the American free enterprise system, R. W. Brown, president of the Reading, said on April 23 in a speech delivered at the 175th anniversary convocation of Dickinson College in Carlisle, Pa. "Five years after the first engine ran in 1830 a thousand miles of track had been laid and 200 charters had been granted in eleven states," he added.

"American railroads now operate over 400,000 miles of trackage and more than 17,000 passenger trains and 24,000 freight trains move over these lines every 24 hours. . . . Today the railroads are alert to changing conditions. They are almost completely modernizing their plant. Expenditures of $500 million for passenger equipment, another half billion for freight cars and $[illegible]00 million for locomotives are being made. A half billion will be spent annually for improvements for years to come."

Mr. Brown pointed out, however, that many restrictions have narrowed the area of the free enterprise system in recent years, which, while it may be disturbing to business generally, is an old story to the railroads. "Government regulation of railroads was designed originally to supervise rates and charges, to prescribe rates that were fair, reasonable and non-discriminatory. But we have traveled a long distance during the past sixty years. Today, the Interstate Commerce Commission not only determines rates and charges—it controls service features; it prescribes the accounting procedure of the carriers and it must approve issues of railroad securities, consolidations, coordinations and what not."

Describing other federal and state agencies which have a voice in railroad affairs, the amounts paid to the federal government through reduced transportation rates based on land grants and the subsidies given to competitors of the railroads, such as air lines, highway and waterway users, the Reading executive said that "as a result of all this unfairness the railroads today are on the defensive as a private enterprise.

"Whether we like it nor not, we are at the crossroads. We must determine where we go from here. If we really want private enterprise we must preserve it. The only way to preserve it is to cling to our principles of government and to permit business to earn enough to pay its way—and pay its way in full. Only in this way can we raise our standard of living; provide jobs at good wages and good working conditions; and reward risk capital, which is the savings of our people."

Court Upholds Order Against Cement Basing-Point Pricing

The United States Supreme Court on April 26 upheld the Federal Trade Commission's "cease and desist" order against the cement industry's pricing practices which include a multiple basing-point system. In doing so, however, the court emphasized that it read the F.T.C. order as one which ran against concerted and systematic action, and not against freight-rate absorptions

made by an individual company on its own initiative to meet competitive situations.

"Most of the objections to the order," the court said, "appear to rest on the premise that its terms will bar an individual cement producer from selling cement at delivered prices such that its net return from one customer will be less than from another, even if the particular sale be made in good faith to meet the lower price of a competitor. The commission disclaims that the order can possibly be so understood, nor do we so understand it."

The court's decision was embodied in a six-to-one opinion by Justice Black. It reversed a circuit court of appeals ruling which had vacated the F.T.C. order. Justice Burton filed a dissenting opinion while Justices Douglas and Jackson did not participate. The F.T.C. order runs against the Cement Institute, its 74 corporate members, and 21 individuals who are associated with the institute. The potential effect on railroad traffic of the F.T.C. policy reflected in this order was discussed by Leon Leighton, a member of the New York bar, in articles appearing in *Railway Age* of October 20, 1947, page 55, and December 27, 1947, page 36.

Canadian Transport Board to Investigate Freight Rates

The Canadian Board of Transport Commissioners has been ordered by the Cabinet to undertake a general investigation of freight rates. Public hearings will be held at different points throughout the country. The Cabinet order pointed out that since the last general freight rates investigation concluded in 1927 many changes have taken place in the Canadian economy, and the new investigation has been ordered with a view to the establishment of a fair and reasonable rate structure which will, under substantially similar circumstances and conditions, be equitable in its application to all persons and localities.

Canadian Board Recommends General 7-Cent Wage Increase

The conciliation board established to deal with a wage dispute between the Canadian railroads—including the Toronto, Hamilton & Buffalo, the Ontario Northland and the Canadian National and the Canadian Pacific and their subsidiaries—and operating and non-operating unions representing approximately 112,000 railroad employees, has reported to the Canadian minister of labor that it was unable to bring about a satisfactory settlement. The board recommended that the employees be granted a general wage increase of 7 cents an hour, effective as of April 8, instead of the 35 cents per hour increase, effective December 20, 1947, sought by the unions. In a minority report, M. W. Wright, the board's "labor" member, recommended an hourly increase of 20 cents, to be effective last December 20.

A second conciliation board, appointed to deal with several matters in dispute between the Ontario Northland and the C.N.R. and the C.P.R. and their subsidiaries, and the Canadian Brotherhood of Railway Employees & Other Transport Workers, representing about 28,000 employees, reported settlement of the union's request for "liberalization of existing provisions regarding payment for statutory holidays." The board also reported it was unable to effect a settlement of the union's requests for a general increase of 35 cents an hour effective last December 20, payment for up to 12 days' (cumulative) time for absence from duty caused by illness, and a union shop and the check-off of union dues and assessments. The board reported the parties have agreed "to give further consideration to the question of a special wage increase" of 10 cents an hour, in addition to the requested general increase, for classified laborers and coal plant operators.

President Truman receives his scroll invitation to the Chicago Railroad Fair, presented recently at a White House ceremony. With him are (left to right) Carl R. Grey, Jr., veterans administrator and formerly vice-president of the Chicago & North Western, Major Lenox Lohr, president of the fair, and C. A. Miller, "conductor" of the replica of the C. & N. W. "Pioneer"

Steam Locomotive Research Institute Election

R. P. Johnson, chief engineer of the Baldwin Locomotive Works, has been elected president of the Steam Locomotive Research Institute, Inc. Alex Ross, mechanical engineer of the American Locomotive Company, has been elected vice-president, and J. B. Ennis has been elected a member at large of the Technical Committee of the institute.

Recommendations for Loading Machinery on Open-Top Cars

According to a circular letter recently sent out by the secretary of the Mechanical Division of the Association of American Railroads, considerable misunderstanding exists about the preparation, handling, blocking and inspection of machinery for shipment from the War Assets Storage Depots and other sources.

Some of the conditions reported and the corrective measures recommended are as follows:

(1) The movable parts of machines equipped with traversing tables, movable heads, rotating parts, suspended motors, panels, cages, etc., are not always properly prepared for railroad handling in that such parts are not substantially secured to prevent them from coming loose in transit. While these movable or detachable parts are substantial enough when the machine is set for operation, it is an entirely different matter when the machine is subjected to car oscillation, impact, etc., and, therefore, additional securement is necessary in many cases.

(2) Counterweights are of many types and secured by various methods, some of which are inadequate. Proper attention should be given to these items to make sure that they are lowered and locked to provide as low a center of gravity on the car as possible. This is a matter which should be directed to the attention of shippers' representatives preparing the shipments.

(3) Cap screws and studs, shaft keys, etc., are being reported at destination as loose, thereby causing machines to collapse in transit. This detail should likewise be taken care of in advance by representatives of the shippers preparing the shipment.

(4) Proper types and sizes of skids are not always used and in some cases machines have been mounted on broken or deteriorated skids. It is the responsibility of the railroad to discover such conditions and report them to the shipper for correction before shipments are allowed to go forward.

(5) Motors, gear boxes, control panels, etc., are often suspended from pedestals or mounted on the top of column-type machines. In preparing shipments, these should be removed where necessary and properly secured on the car.

While it is the responsibility of the railroad inspector to ascertain that shipments are prepared in accordance with the loading rules, the letter points out that, generally speaking, the railroad inspector is not qualified to determine many of the mechanical features of the various types of machines

being shipped, such as the strength of attachments and the blocking and securement features of the movable parts of the machines. It urges railroads to impress upon shippers the importance of properly securing the attachments and movable parts of the machine as well as the proper blocking of the machine itself on the car.

Further Hearing June 2 On P.&D. Service Costs

The Interstate Commerce Commission has announced that further hearings in four proceedings — No. 29555, Pick-up and Delivery Services by Railroads; No. MC-C-542, Pick-Up and Delivery Service by Motor Carriers; No. 29556, Charges on Small Shipments by Railroads; and No. MC-C-543, Charges on Small Shipments by Motor Carriers — will be held starting June 2 at its Washington, D. C. offices. Commissioners Rogers and Alldredge will preside, assisted by Examiners Stiles, Cummings, Aplin, Vandiver, Kassel and Boisseree.

According to the notice, the proceedings have been set for hearing upon a common record to receive cost evidence, supported by exhibits, from members of the commission's staff. Cross-examination of the commission witnesses, whose proposed testimony and exhibits were made public April 27, will follow.

After this hearing, and without further notice, separate hearings will continue in the two pick-up and delivery cases before Commissioner Rogers and Examiners Stiles, Aplin and Boisseree, and in the two small shipments cases before Commissioner Alldredge and Examiners Cummings, Vandiver and Kassel. The commission's notice also sets up special procedures to be followed in each of the two separate hearings.

The commission also stated that the proposals of committees representing the railroads, motor carriers and shippers should be ready for presentation at the hearings.

EQUIPMENT AND SUPPLIES

Domestic Equipment Orders Reported in April

Domestic orders for 19 Diesel-electric and 12 steam locomotives and 9,564 freight-train cars were reported in *Railway Age* in April. No passenger car orders were reported. The estimated cost of the locomotives is $8,250,000 and the freight-train cars will cost approximately $38,250,000. The accompanying table lists the orders in detail.

During the first four months of 1948, *Railway Age* has reported domestic orders for 357 Diesel-electric and 34 steam locomotives costing an estimated $74,492,000; a total of 41,779 freight-train cars, the estimated cost of which is $163,868,500; and 198 passenger-train cars, at an estimated cost of $25,650,000.

Date	Purchaser	No.	Type	Builder
LOCOMOTIVES				
April 17	C. G. W.	2	6,000-hp.D.-E. frt.	Electro-Motive
		3	1,500-hp. D.-E. rd.	Electro-Motive
		3	1,000-hp. D.-E. sw.	Electro-Motive
April 17	G. T. W.	11	3,000-hp. D.-E. frt.	Electro-Motive
April 24	N. & W.	7	2-8-8-2	Co. Shops
		5	2-6-6-4	Co. Shops
FREIGHT CARS				
April 10	C. & O.	2,000	70-ton Hopper	Amer. Car & Fdy.
		1,000	70-ton Hopper	Bethlehem
April 10	L. & N.	4,000	50-ton Hopper	Pullman-Standard
April 10	M. St. P. & S. Ste. M.	200	50-ton Gondola	Co. Shops
April 17	C. & N. W.	1,000	50-ton Box	Pullman-Standard
		650*	70-ton Hopper	Pullman-Standard
		650*	70-ton Gondola	Bethlehem
April 24	St. L.—S. F.	50	70-ton Gondola	Pressed Steel
April 24	Term. R. R. Assn.	14	Caboose	Int. Ry. Car

* 150 of these cars are for the Chicago, St. Paul, Minneapolis & Omaha.

FREIGHT CARS

The **St. Louis Southwestern** has ordered 50 70-ton covered hopper cars from the American Car & Foundry Co.

The **Delaware, Lackawanna & Western** is inquiring for 500 50-ton box cars and 100 70-ton covered hopper cars.

LOCOMOTIVES

The **New York Central System** placed orders this week for 91 Diesel-electric locomotives at an approximate cost of $15,600,000. The Electro-Motive Division of the General Motors Corporation will build 12 3,000-hp. freight and 37 1,000-hp. switching locomotives (of these switching locomotives 29 are for the Indiana Harbor Belt, 16 of which will be used to make up 8 2,000-hp. transfer locomotives); Fairbanks, Morse & Co., will construct 4 4,000-hp. freight, 2 1,000-hp. switching and 2 2,000-hp. transfer locomotives (the transfer locomotives also are for the Indiana Harbor Belt); and the American Locomotive Company will build 6 3,000-hp. freight, 26 1,000-hp. switching (of which 10 are for the Pittsburgh & Lake Erie), and 10 600-hp. switching locomotives. Delivery of this new equipment is scheduled for various times during 1949.

SIGNALING

The **Southern Pacific** has placed an order with the Union Switch & Signal Co. for the necessary materials to extend to Alhambra, Cal., the existing Indio, Cal., to Colton centralized traffic control signaling, an addition of 51 mi. The order includes the addition of a 7.5-ft. section to the present 12.5-ft. machine at Beaumont, and will require the use of two additional code line sections, both of which will be handled by coded carrier. Other items involved in this order include Style M-22A dual-control electric switch layouts, electric switch locks for hand-thrown main-line switches, Style H-2 searchlight high and dwarf signals, motor car indicators, relays, transformers, rectifiers and housing. The installation work will be handled by railroad forces.

The **Northern Pacific** has ordered equipment from the General Railway Signal Company for an NX electric interlocking to control a junction point at Huntley, Mont. The 20 by 37-in. control panel will be equipped with movable-point switch indicators, 10 entrance knobs, 10 exit buttons, 11 track indication lights and 4 test keys for the control of 6 switch machines and 14 signals. Equipment ordered includes Type-K relays, Model-5C electric switch machines, Type-SA searchlight signals and steel instrument houses.

CAR SERVICE

I.C.C. Service Order No. 436, which requires prompt pulling and forwarding of empty refrigerator cars, has been modified by Amendment No. 7, which set back the expiration date from April 20 to September 8.

General Permit ODT 18A, Revised-39A, has been issued by the Office of Defense Transportation to authorize the shipment of new fresh Irish potatoes from any point in the United States, except Arizona, California or New Mexico, in lots, when iced or when ice is available, of not less than 36,000 lb. minimum weight, and in lots, when ice is not available, of 30,000 lb. minimum weight; and from any point in Arizona, California or New Mexico in lots of not less than 36,000 lb. minimum weight. The permit became effective April 22 and expires May 31.

Special Direction ODT 18A-1, also has been issued by the O.D.T., effective April 21. It requires a two-tier loading of asphalt in cartons or fibre board drums containing not less than 100 lb. or more than 250 lb., in lieu of a loading requirement of 80,000 lb. minimum

weight. It also fixes the same loading requirements for asphalt in steel drums with open heads as now apply when it is loaded in wooden barrels with open heads, i.e., that they be loaded one tier high covering the entire floor space of the car.

SUPPLY TRADE

Samuel H. Gifford has been appointed sales representative of the **Wayne Crane Division, American Steel Dredge Company, Inc.,** at Fort Wayne, Ind.

The **Cummins Engine Company** has announced the election of **L. W. Beck** as vice-president—sales; **D. J. Cummins** as vice-president—engineering; **W. M. Harrison** as vice-president and treasurer; and **Carl R. Fox,** formerly vice-president and works manager, as a director.

L. W. Beck

Mr. Beck joined Cummins Engine

D. J. Cummins

nine years ago as manager of the central regional office at Chicago and has worked as general sales manager at Columbus, Ohio, headquarters since September, 1946. In his new position he will be in charge of all sales, service and advertising activities. Mr. Cummins joined the company in 1919 and was appointed manager of engineering in July, 1947. Mr. Harrison has been with Cummins since 1943 and, at the time of his recent election, was treasurer and controller of the company.

W. M. Harrison

Lester Selig, vice-chairman of the board of directors of the **General American Transportation Corporation,** at Chicago, has been elected chairman of the board, succeeding **Max Epstein,** who becomes chairman of the executive committee. **John P. McFadden,** eastern sales representative at New York, has been elected vice-president and a director of the company, succeeding **Bennett Epstein,** who has retired. **Howard C. Westfall,** eastern manager for the tank storage terminal division, has been elected assistant secretary.

Sidney J. Theobald, formerly general agent of the Savannah & Atlanta, with headquarters at Chicago, and more recently associated with the Keeshin Motor Express in that city, has joined the sales department of the **Clipper Carloading Company** in Chicago. During World War II, Mr. Theobald was a rail transportation assistant with the Office of Defense Transportation.

The **Independent Pneumatic Tool Company** has announced the removal of its executive and administrative staff from Chicago to a newly-constructed administration building adjacent to its main works in Aurora, Ill.

Purchase of the manufacturing assets and patent interests of the **Nelson Stud Welding Corporation** of Lorain, Ohio, and its associated companies, by the recently-formed **Morton-Gregory Corporation** of Michigan, has been announced by Henry J. Morton of Detroit, Mich., president, and George E. Gregory, Toledo, Ohio, vice-president and general manager of the new firm. The Nelson manufacturing and engineering activities will be centralized at the Lorain plant, which will be known as the Nelson stud welding division of Morton-Gregory.

Fred A. Poor, president of **Poor & Co.,** at Chicago, has been elected chairman. **Victor C. Armstrong** has been elected vice-chairman, with headquarters at New York. **Philip W. Moore,** vice-president at Chicago, has been elected president.

Reynolds Internacional de Mexico, S. A. has announced the dedication of the first aluminum foil plant in Mexico, erected at a cost of $2,500,000. The plant, located at Tlalnepantla, a suburb of Mexico City, has a floor space of 100,000 sq. ft.

George W. Rukgaber, whose appointment as district sales representative in the Chicago regional sales office of the **Electro-Motive Division,** General Motors Corporation, was reported in *Railway Age* of April 17, was born at Hornell, N. Y., and received his higher education at Toledo University and New York University. Immediately prior to his new appointment, Mr. Rukgaber was manager of the "Train of Tomorrow," having supervised the equipping of the train during its construction period and managed it on a nationwide tour. Previously, he had been associated with General Motors for 19 years, 15 with the General Exchange Insurance Corporation, and four years with the corporation's department of public relations.

George W. Rukgaber

The **American Welding & Manufacturing Co.** has announced the election of **E. W. Wilhelmy,** secretary-treasurer since 1938, as vice-president of finance, a newly created post; **E. C. Fales,** formerly vice-president in charge of operations, as executive vice-president; and **Henry H. Alden,** formerly assistant secretary-treasurer, as treasurer and assistant secretary.

The **Unitcast Corporation,** Toledo, Ohio, in cooperation with Canadian associates, has announced the organization of a subsidiary, **Canadian Unitcast-Steel, Ltd.,**

THE BALTIMORE AND OHIO RAILROAD COMPANY

SUMMARY OF ANNUAL REPORT—1947

To All Security Holders:

Industrial production in 1947 was maintained at a high level and the volume of freight transported by the Company was greater than for any preceeding peacetime year. Total earnings were $367,600,700, but expenses reached an all-time high at $358,341,319, leaving net earnings of $9,259,381. Comparison with 1946 follows:

	1947	Comparison with 1946
EARNINGS:		
From transportation of freight, passengers, mail, express, etc.	$360,294,995	$ I 55,310,279
From other sources—interest, dividends, rents, etc.	7,305,705	I 912,607
Total	$367,600,700	$ I 56,222,886
EXPENSES:		
Payrolls, material, fuel, services and taxes	$327,255,262	$ I 52,381,502
Interest, rents and misc. services	31,086,057	D 857,068
Total	$358,341,319	$ I 51,524,434
NET EARNINGS	$ 9,259,381	$ I 4,698,452

The return on the Company's net investment of $956,423,861 in property devoted to transportation service was only 3.04%, or about half of the 6% considered a fair return.

Confronted by sharply higher wage and supply costs, and an inadequate return on investment in their properties, the railroads petitioned the Interstate Commerce Commission during 1947 for increases in rates and fares. Two interim freight rate increases were granted, effective October 13, 1947, and January 5, 1948. It is estimated these interim increases will yield the company 16% additional freight revenue annually based on present traffic volume. The Commission still has before it for final decision the petitions for permanent relief. Passenger fares were increased June 1, 1947 from 2.2 cents to 2.5 cents per mile in coaches, and from 3.3 cents to 3.5 cents per mile in pullman cars. Increases in express rates and an interim increase in pay for handling railway mail were also authorized.

The acquisition of 30 powerful steam locomotives, seven Diesel passenger locomotives, 1940 steel box cars, 7365 steel hopper cars, 100 express cars and miscellaneous passenger and work car units, at a cost of about $42,000,000, coupled with substantial improvements in line, track, terminals and structures at many points on the railroad, brought B. & O.'s transportation efficiency up to the highest point in its history. With the delivery of 5636 additional steel hopper cars, 60 Diesel road freight locomotives and 100 Diesel switchers, scheduled for 1948, it is believed the Company's freight handling equipment should be adequate to meet traffic requirements.

The Management acknowledges, with appreciation, the loyalty and efforts of officers and employees, and the cooperation of stockholders, patrons and agencies of the Government throughout the year.

R. B. WHITE,
President

[Advertisement]

and the purchase, by its subsidiary, of the steel casting foundry and business of the **Canadian Brake Shoe & Foundry Co.**, in Sherbrooke, Que. The new company's office will be located in Sherbrooke.

John J. Huether has been appointed manager of the transportation division, a new industry sales division of the apparatus department of the **General Electric Company**. Mr. Huether was formerly manager of the mining and steel mill section of the industrial department.

John B. Morrow, Jr. has been appointed personnel manager of the southern wheel division of the **American Brake Shoe Company**. He was formerly superintendent of the division's plant in Portsmouth, Va.

OBITUARY

William E. Cade, a member of the Cade, Dwyer Company of Boston, Mass., for 45 years, died on April 22. He was 67 years old. Mr. Cade had been secretary of the New England Railroad Club for 35 years.

ORGANIZATIONS

D. M. MacMaster, executive officer of the Chicago Railroad Fair, will address the **Chicago Chapter** of the **Railway & Locomotive Historical Society** at its meeting on May 14, at 84 East Randolph street, 7th floor. His subject will be "The Chicago Railroad Fair."

The next meeting of the **Northern Indiana Chapter Railway & Locomotive Historical Society,** will be held on May 11, in Room 8 of the Union Station at South Bend, Ind. Carleton W. Meyer, assistant to the president of the Chesapeake & Ohio, will discuss recent developments in steam motive power.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 332 S. Michigan Ave., Chicago 4, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo. Next meeting, October 26-28, 1948, Miami, Fla.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St. New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, June 8-10, 1948, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 20-22, 1948, Hotel Stevens, Chicago Ill.

AMERICAN RAILWAY CAR INSTITUTE. — W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—W. J. Walsh, B. & O. R. R., Baltimore 1, Md.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 15-17, 1949, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Harry Walker, D. & R. G. W. R. R., Room 204, Rio Grande Bldg., Denver, Colo.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 21-27, 1948, Book-Cadillac Hotel, Detroit, Mich.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Semi-annual meeting, May 30-June 4, 1948, Milwaukee, Wis. Annual meeting, November 28-December 3, 1948, New York, N. Y.

Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

(Continued on page 64)

UNION PACIFIC RAILROAD COMPANY

Fifty-First Annual Report — Year Ended December 31, 1947.

TO THE STOCKHOLDERS OF UNION PACIFIC RAILROAD COMPANY:

The Board of Directors submits the following report for year ended December 31, 1947, for Union Pacific Railroad Company, including Oregon Short Line Railroad Company, Oregon-Washington Railroad & Navigation Company, Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company, whose properties are leased to Union Pacific Railroad Company. The lessor companies have certain income and charges, and the figures in the Income Account, other than those relating to transportation operations, and in the Surplus Account and General Balance Sheet and tabulations and tables relating thereto are stated on a consolidated basis, *excluding offsetting accounts between companies.*

Income.

The operated mileage at close of year and income for year 1947, compared with 1946, were as follows:

	1947	1946	Increase	Decrease
Operated Mileage at Close of Year				
Miles of road	9,755.64	9,774.91	.....	19.27
Miles of additional main track	1,530.41	1,531.45	.....	1.04
Miles of yard tracks and sidings	4,523.81	4,490.59	33.22	
Total Mileage Operated	15,809.86	15,796.95	12.91	
Transportation Operations.				
Operating revenues	$410,053,704.83	$361,395,534.29	$48,658,170.54	
Operating expenses	300,454,623.61	286,809,739.61	13,644,884.00	
Revenues over expenses	$109,599,081.22	$74,585,794.68	$35,013,286.54	
Taxes	58,431,619.97	35,403,648.23	23,027,971.74	
Railway Operating Income	$51,167,461.25	$39,182,146.45	$11,985,314.80	
Rents from use of joint tracks, yards, and terminal facilities	1,845,195.27	1,816,712.47	28,482.80	
	$53,012,656.52	$40,998,858.92	$12,013,797.60	
Hire of equipment—debit balance	$12,920,785.80	$10,999,214.01	$1,921,571.79	
Rents for use of joint tracks, yards, and terminal facilities	3,334,639.51	3,046,293.10	288,346.41	
	$16,255,425.31	$14,045,507.11	$2,209,918.20	
Net Income from Transportation Operations	**$36,757,231.21**	**$26,953,351.81**	**$9,803,879.40**	
Income from Investments and Sources other than Transportation Operations.				
Income from oil and gas operations—net	$16,957,217.95	$6,621,631.34	$10,335,586.61	
Dividends on stocks owned	2,343,818.00	2,913,483.50	.....	$569,665.50
Interest on bonds and notes owned	2,273,337.40*	2,717,036.05	.....	443,698.65
Other interest income	140,205.89*	814,508.64	.....	674,302.75
Rents from lease of road and equipment	279,527.54	315,029.74	.....	35,502.20
Miscellaneous rents	512,984.35	510,356.02	2,628.33	
Miscellaneous income	3,528,178.27	1,906,345.09	1,621,833.18	
Total	$26,035,269.40	$15,798,390.38	$10,236,879.02	
Total Income	$62,792,500.61	$42,751,742.19	$20,040,758.42	
Fixed and Other Charges.				
Interest on funded debt	$7,487,770.82	$11,384,595.08	.....	$3,896,824.26
Interest on unfunded debt	368,404.78	365,187.93	$3,216.85	
Miscellaneous rents	28,928.43	32,053.33	.....	3,124.90
Miscellaneous charges	459,901.03	538,302.57	.....	78,401.54
Total	$8,345,005.06	$12,320,138.91	.....	$3,975,133.85
Net income from All Sources	**$54,447,495.55**	**$30,431,603.28**	**$24,015,892.27**	
Released from "Reserve against possible refunds on U. S. Government shipments"	1,547,973.23	3,780,134.95	.....	$2,232,161.72
Total for Disposition	**$55,995,468.78**	**$34,211,738.23**	**$21,783,730.55**	

DISPOSITION.

Dividends on Stock of Union Pacific Railroad Co.				
Preferred stock:				
2 per cent paid April 1, 1947	$1,990,862.00			
2 per cent paid October 1, 1947	1,990,862.00	$3,981,724.00	$3,981,724.00	
Common stock:				
1½ per cent paid April 1, 1947	$3,334,365.00			
1½ per cent paid July 1, 1947	3,334,365.00			
1½ per cent paid October 1, 1947	3,334,365.00			
5½ per cent payable January 2, 1948	12,226,005.00	22,229,100.00	13,337,460.00	$8,891,640.00
Total Dividends		$26,210,824.00	$17,319,184.00	$8,891,640.00
Transferred to Earned Surplus—Unappropriated		**$29,784,644.78**	**$16,892,554.23**	**$12,892,090.55**

*Restated.

[Advertisement]

Operating results for year 1947 compared with year 1946:

	1947	1946	Increase	Decrease	Per Cent.
Average miles of road operated	9,772.88	9,775.33	.....	2.45	——
Operating Revenues					
Freight	$330,468,521.09	$263,825,662.84	$66,642,858.25	.....	25.3
Passenger	46,412,313.47	64,767,862.71	.....	$18,355,549.24	28.3
Mail	10,261,533.72	7,928,255.67	2,333,278.05	.....	29.4
Express	5,635,676.10	6,420,630.93	.....	784,954.83	12.2
Other passenger-train	7,121,572.81	8,321,134.77	.....	1,199,561.96	14.4
Switching	3,303,997.27	2,732,891.12	571,106.15	.....	20.9
Other	6,850,090.37	7,399,096.25	.....	549,005.88	7.4
Total operating revenues	$410,053,704.83	$361,395,534.29	$48,658,170.54	.....	13.5
Operating Expenses					
*Maintenance of way and structures	$53,128,675.48	$46,576,730.42	$6,551,945.06	.....	14.1
*Maintenance of equipment	69,181,744.75	69,235,048.90	.....	$53,304.15	.1
Total maintenance	$122,310,420.23	$115,811,779.32	$6,498,640.91	.....	5.6
Traffic	8,486,055.96	7,880,227.66	605,828.30	.....	7.7
Transportation	146,741,603.94	140,262,539.14	6,479,064.80	.....	4.6
Miscellaneous operations	13,130,293.97	13,633,024.46	.....	$502,730.49	3.7
General	9,786,249.51	9,222,169.03	564,080.48	.....	6.1
Total operating expenses	$300,454,623.61	$286,809,739.61	$13,644,884.00	.....	4.8
Revenues over expenses	$109,599,081.22	$74,585,794.68	$35,013,286.54	.....	46.9
Taxes					
State and county	$13,885,835.00	$12,480,000.00	$1,405,835.00	.....	11.3
Federal income	$30,449,589.61	$12,269,366.11	$18,180,223.50	.....	148.2
Federal unemployment insurance	4,802,208.64	4,791,085.07	11,123.57	.....	.2
Federal retirement	9,169,136.76	5,573,650.58	3,595,486.18	.....	64.5
Other federal	124,849.96	289,546.47	.....	$164,696.51	56.9
Total federal	$44,545,784.97	$22,923,648.23	$21,622,136.74	.....	94.3
Total taxes	$58,431,619.97	$35,403,648.23	$23,027,971.74	.....	65.0
Railway operating income	$51,167,461.25	$39,182,146.45	$11,985,314.80	.....	30.6
Equipment rents (debit)	12,920,785.80	10,999,214.01	1,921,571.79	.....	17.5
Joint facility rents (debit)	1,489,444.24	1,229,580.63	259,863.61	.....	21.1
Net railway operating income	$36,757,231.21	$26,953,351.81	$9,803,879.40	.....	36.4
Per cent—Operating expenses of operating revenues	73.27	79.33	.....	6.09	7.7
Freight Traffic (*Commercial Freight only*)					
Tons of revenue freight carried	56,420,476	48,002,636	8,417,840	.....	17.5
Ton-miles, revenue freight	31,738,920,871	27,474,365,447	4,264,555,424	.....	15.5
Average distance hauled per ton (*miles*)	562.54	572.35	.....	9.81	1.7
Average revenue per ton-mile (*cents*)	1.041	.960	.081	.....	8.4
Average revenue per freight-train mile	$10.34	$8.66	$1.68	.....	19.4
Passenger Traffic (*Excludes Motor-Car Trains*)					
Revenue passengers carried	2,875,329	4,730,542	.....	1,855,213	39.2
Revenue passengers carried one mile	2,109,816,057	3,645,281,435	.....	1,535,465,378	42.1
Average distance hauled per passenger (*miles*)	733.77	770.58	.....	36.81	4.8
Average passengers per passenger-train mile	135.79	191.84	.....	56.05	29.2
Average revenue per passenger-mile (*cents*)	2.193	1.772	.421	.....	23.8
Average revenue per passenger-train mile, passengers only	$2.98	$3.40	.....	$ .42	12.4
Average total revenue per passenger-train mile	$3.98	$4.30	.....	$ .32	7.4
* Include depreciation, amortization and retirement charges:					
Maintenance of way and structures	$5,930,611.85	$4,795,776.02	$1,134,835.83		
Maintenance of equipment	10,253,350.73	9,431,380.55	821,970.18		

Expenditures chargeable to investment in Road and Equipment Property:

Additions and Betterments (excluding equipment)	$ 9,196,025.84
Equipment	37,481,854.65
Total expenditures	$46,677,880.49
Credits to investment in Road and Equipment Property:	
Cost of fixed property retired and not replaced	$ 1,623,901.37
Cost of equipment retired	14,778,624.91
Total credits	$16,402,526.28
Net increase in investment in "Road and Equipment Property"	$30,275,354.21

[Advertisement]

General Balance Sheet — Assets

	December 31, 1947	December 31, 1946	Increase	Decrease
Investments:				
Road and Equipment	$1,110,377,934.30	$1,080,102,580.09	$30,275,354.21	
Less;				
Receipts from improvement and equipment fund	$23,823,091.13	$23,823,091.13		
Appropriations from income and surplus prior to July 1, 1907, credited to this account	13,310,236.52	13,310,236.52		
Total	$37,133,327.65	$37,133,327.65		
Road and equipment property	$1,073,244,606.65	$1,042,969,252.44	$30,275,354.21	
Donations and grants (Credit)	*$11,998,756.59*	*$11,795,049.39*	*$203,707.20*	
Reserve for depreciation—road and equipment (Credit)	*$173,878,433.87*	*$173,436,083.69*	*$443,350.18*	
Reserve for amortization of national defense projects (Credit)	*$57,803,237.17*	*$59,437,104.76*	.....	*$1,633,867.59*
Sinking funds	$222.50	$2,507.50	.....	$2,285.00
Capital and other reserve funds	$143,773.28	$539,935.64	.....	$396,162.36
Miscellaneous physical property	$28,427,836.23	$26,192,714.72	$2,235,121.51	
Reserve for depreciation—miscellaneous physical property (Credit)	*$14,172,864.54*	*$12,922,357.52*	*$1,250,507.02*	
Investments in affiliated companies:				
Stocks	$20,304,013.24	$18,679,195.24	$1,624,818.00	
Notes	329,594.43	348,344.43	.....	$18,750.00
Advances	8,491,049.55	8,771,547.76	.....	280,498.21
Total	$29,124,657.22	$27,799,087.43	$1,325,569.79	
Investments in other companies:				
Stocks	$64,048,872.42	$64,052,376.08	.....	$3,503.66
Bonds and notes	22,797,809.23	22,725,409.57	$72,399.66	
Total	$86,846,681.65	$86,777,785.65	$68,896.00	
Reserve for adjustment of investments in securities (Credit)	*$33,842,953.87*	*$33,845,942.13*	.....(a)	*$2,988.26*
Total Investments	$926,091,531.49	$892,845,745.89	$33,245,785.60	
Current Assets:				
Cash	$43,312,877.48	$43,001,365.39	$311,512.09	
Temporary cash investments (U. S. Government securities)	96,302,249.82*	163,551,106.09	.....	$67,248,856.27
Special deposits	605,496.84	1,772,703.93	.....	(b)1,167,207.09
Loans and bills receivable	789,140.00	28,940.00	760,200.00	
Traffic and car-service balances—net	11,272,427.22	9,017,861.12	2,254,566.10	
Net balance receivable from agents and conductors	4,343,868.03	4,167,836.28	176,031.75	
Miscellaneous accounts receivable	16,791,552.92	12,216,168.34	4,575,384.58	
Material and supplies	35,940,295.93	34,845,661.75	1,094,634.18	
Interest and dividends receivable	1,030,301.84*	1,248,908.74	.....	218,606.90
Accrued accounts receivable	12,529,733.69	9,071,675.75	3,458,057.94	
Other current assets:				
Baltimore and Ohio Railroad Co. Capital stock applicable to payment of extra dividend of 1914	106,897.30	110,133.30	.....	3,236.00
Miscellaneous items	1,023,344.83	189,843.90	833,500.93	
Total Current Assets	$224,048,185.90	$279,222,204.59	.....	$55,174,018.69
Deferred Assets:				
Working fund advances	$108,634.79	$107,753.46	$881.33	
Other deferred assets	3,499,086.48	33,020,922.56	.....	(c)$29,521,836.08
Total Deferred Assets	$3,607,721.27	$33,128,676.02	.....	$29,520,954.75
Unadjusted Debits:				
Prepayments	$2,622.00	$3,807.81	.....	$1,185.81
Other unadjusted debits	1,490,011.17	1,482,300.03	$7,711.14	
Total Unadjusted Debits	$1,492,633.17	$1,486,107.84	$6,525.33	
Grand Total	$1,155,240,071.83	$1,206,682,734.34	.....	$51,442,662.51

(a) Principally loss from sale of Baltimore & Ohio R.R. Co. common stock, charged to this account.

(b) Due chiefly to payment by Bond Trustees, from funds deposited with them by Company in prior years, of principal of and premiums on called bonds and of interest to dates on which such bonds were called.

* Restated.

[Advertisement]

General Balance Sheet — Liabilities

	December 31, 1947	December 31, 1946	Increase	Decrease
Capital Stock:				
Common stock	$222,302,500.00	$222,302,500.00		
Preferred stock	99,591,580.79	99,591,580.79		
Total Capital Stock	$321,894,080.79	$321,894,080.79		
Funded Debt	240,710,232.09	319,891,869.58	.....	$79,181,637.49
Total Capital Stock and Funded Debt	$562,604,312.88	$641,785,950.37	.....	$79,181,637.49
Due to Affiliated Companies	$11,180,098.87	$9,470,009.92	$1,710,088.95	
Current Liabilities:				
Audited accounts and wages payable	$24,826,364.65	$23,814,245.01	$1,012,119.64	
Miscellaneous accounts payable	4,931,811.00	3,684,945.13	1,246,865.87	
Interest matured unpaid:				
Coupons matured, but not presented	492,197.20	1,931,289.84	.....	$1,439,092.64
Coupons and interest on registered bonds, due first proximo	104,277.50	2,191,285.00	.....	2,087,007.50
Dividends matured unpaid:				
Dividends due but uncalled for	293,038.31	336,697.25	.....	43,658.94
Extra dividend on common stock declared January 8, 1914, payable to stockholders of record March 2, 1914, unpaid	115,338.34	118,876.61	.....	3,538.27
Dividend on common stock payable second proximo	12,226,005.00	3,334,365.00	8,891,640.00	
Unmatured interest accrued	1,671,471.96	1,692,014.03	.....	20,542.07
Accrued accounts payable	7,590,046.69	7,289,449.10	300,597.59	
Taxes accrued	50,075,242.78	32,170,473.67	17,904,769.11	
Other current liabilities	4,696,491.98	3,356,353.57	1,340,138.41	
Total Current Liabilities	$107,022,285.41	$79,919,994.21	$27,102,291.20	
Deferred Liabilities	$8,041,593.42	$7,676,282.09	$365,311.33	
Unadjusted Credits:				
Premium on funded debt	$4,923,914.91	$5,250,429.32	.....	$326,514.41
Reserve for fire insurance	15,838,605.05	14,964,846.60	$873,758.45	
Reserve for depreciation—leased property	5,050.57	5,236.42	.....	185.85
Other unadjusted credits	3,828,051.39	33,793,316.66	.....	(c)29,965,265.27
Total Unadjusted Credits	$24,595,621.92	$54,013,829.00	.....	$29,418,207.08
Total Liabilities	**$713,443,912.50**	**$792,866,065.59**	.....	**$79,422,153.09**
Surplus:				
Paid-in surplus	$860.00	$860.00		
Earned surplus—appropriated:				
Additions and betterments	$28,522,352.23	$28,522,352.23		
Funded debt retired through income and surplus	4,323,822.41	3,118,978.66	$1,204,843.75	
Sinking fund reserves	222.50	2,507.50	.....	$2,285.00
Reserve against possible refunds on U. S. Government shipments	2,194,172.98	3,742,146.21	.....	1,547,973.23
Total Earned Surplus—Appropriated	$35,040,570.12	$35,385,984.60	.....	$345,414.48
Earned Surplus—Unappropriated	**$367,170,181.97**	**$338,845,276.91**	**$28,324,905.06**	
Total Earned Surplus	$402,210,752.09	$374,231,261.51	$27,979,490.58	
Total Surplus	$402,211,612.09	$374,232,121.51	$27,979,490.58	
As this consolidated balance sheet excludes all intercompany items, securities of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face value of such securities as carried on the books of the issuing companies (less unextinguished discount on the bonds and discount charged to Earned Surplus — Unappropriated but added back in consolidating the accounts) and the amounts at which the securities are carried on the books of the owning companies is set up here to balance	$39,584,547.24	$39,584,547.24		
Grand Total	**$1,155,240,071.83**	**$1,206,682,734.34**	.....	**$51,442,662.51**

(c) Due principally to writing out of these accounts, amounts billed against U. S. Government (not included in Company's income), representing differences between commercial rates and land grants rates on certain freight shipments transported in prior years, because of decisions by U. S. Supreme Court sustaining Government's contention that such shipments were "military or naval property of the United States moving for military or naval and not for civil use," to which land grant rates were applicable under Transportation Act of 1940.

[Advertisement]

bility for $5,500,000 of 2⅛ per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment estimated to cost $6,969,320, as described in *Railway Age* of April 3, page 65. The certificates will be dated April 15 and will mature in 10 annual installments of $550,000, starting April 15, 1949. The report also approves a selling price of 99.556 with a 2⅛ per cent interest rate, the bid of Harris, Hall & Co., and associates, on which the average annual cost will be approximately 2.21 per cent.

Average Prices Stocks and Bonds

	April 27	Last week	Last year
Average price of 20 representative railway stocks	52.41	51.41	44.86
Average price of 20 representative railway bonds	88.77	88.43	89.14

Dividends Declared

Atlantic Coast Line.—$1.00, payable June 14 to holders of record May 19.

International of Central America.—5% preferred (accum.), $1.25, payable May 15 to holders of record May 5.

RAILWAY OFFICERS

EXECUTIVE

William R. Devenish, whose retirement as vice-president of the Canadian National's Western region, with headquarters at Winnipeg, Man., was reported in *Railway Age* of April 17, was born in Ireland on November 21, 1882, and was educated at St. Columbus College and Trinity College, Dublin. After previous experience as an engineer in railway work, he engaged in construction activities with the Transcontinental railway in 1912, and the following year became division engineer for the Intercolonial at Moncton, N. B. After holding supervisory posts at Campbellton, N. B., and Moncton, he was appointed general superintendent for the C. N. at Toronto, Ont., and later at North Bay, Ont. In 1928, Mr. Devenish became general superintendent of the Alberta district, with headquarters at Edmonton, Alta., and in 1936 he was appointed general superintendent of transportation for the Western region. He was advanced to general manager of the Western region in 1939 and to vice-president and general manager in 1942. He relinquished the title of general manager in 1944.

Willis T. Pierson, whose appointment as vice-president and general counsel of the Erie at Cleveland, Ohio, was reported in *Railway Age* of April 24, was born at Clinton, Iowa, and received his public school education in Milwaukee, Wis. He was graduated from the University of Michigan with the degree of LL.B. and joined the Erie in 1917 as a tax clerk in the land and tax department, being appointed chief clerk of that department later in the same year. In January, 1918, Mr. Pierson became special agent of the land and tax department. Just before he entered the Army during World War I he was appointed assistant land and tax agent, holding that position until 1919, when he became chief land appraiser in the valuation department at New York. In 1928 he was advanced to valuation and commerce attorney and in 1937 he became general attorney at Cleveland. Mr. Pierson was promoted to assistant general counsel in 1941 and to general solicitor in 1945. He became general counsel on October 1, 1946, which title he still holds in addition to his recent appointment as vice-president.

F. H. Shaffer, general manager of the St. Louis-San Francisco, at Springfield, Mo., has been promoted to vice-president in charge of operations, with headquarters at St. Louis, Mo.

OPERATING

A. R. Wilson, whose appointment as superintendent of the Capreol division of the Canadian National at Capreol, Ont., was reported in *Railway Age* of April 10, was born at Yarmouth, N. S., and commenced his railway career on May 20, 1919, as a clerk with the C.N.R. at Liverpool, N. S. He subsequently served in various positions in the Maritime Provinces until 1929, when he became relieving agent, Central region, at Sanmaur, Que. Mr. Wilson later served in various capacities until February, 1942, when he became assistant superintendent of the Cochrane division, being transferred to Quebec, Que., in July, 1943; and to Lindsay, Ont., in July, 1944. In February, 1947, he became assistant superintendent of the Belleville division at Belleville, Ont., and following the illness of the divisional superintendent, was appointed acting superintendent, which position he held until his recent appointment.

George A. Voelkner, general superintendent of the Chicago & Western Indiana and the Belt Railway of Chicago, at Clearing, Ill., has been appointed general manager at that point. Mr. Voelkner's former position has been abolished.

Reginald Hayes, whose appointment as general superintendent of the Northern Ontario district of the Canadian National at North Bay, Ont., was reported in *Railway Age* of April 10, was born at Halifax, N. S., and entered the service of the Canadian National on August 1, 1915. Mr. Hayes served in various capacities at Moncton, N. B., until December, 1918, when he went to Montreal, Que., as secretary. The following year he was promoted to chief clerk to the general manager. In March, 1923, he was appointed assistant chief clerk to general manager at Toronto, being promoted to chief clerk in July, 1927. Mr. Hayes was promoted to superintendent of the Hornepayne division in June, 1938, subsequently being transferred to the St. Thomas division, and to the Ottawa division in July, 1944. He became superintendent of the Montreal terminals and St. Jerome divisions at Montreal in March, 1946, which position he held until his recent promotion.

Jack T. Stotler, whose promotion to division superintendent of the Northern Pacific, with headquarters at Fargo, N. D., was reported in *Railway Age* of April 3, was born at Tacoma, Wash., on May 27, 1905. He received his higher education at Washington State College, at Pullman, Wash., having been awarded a degree in mechanical engineering in 1928. Shortly thereafter, Mr. Stotler joined the N. P.'s engineering department at Seattle, Wash., remaining with that department until 1933,

Jack T. Stotler

when he became assistant supervisor of maintenance of the Camas Prairie (controlled jointly by the N. P. and the Union Pacific). Between the years 1935 and 1943, Mr. Stotler held positions on the N. P. successively as roadmaster at Helena, Mont.; roadmaster, Lester, Wash.; division roadmaster, Spokane; roadmaster-trainmaster, East Grand Forks, Minn.; and trainmaster, Yellowstone division, Dickinson, N. D. He became superintendent of ore operations at Superior, Wis., in 1943, and assistant superintendent at Fargo, N. D., in 1946. He was serving in the latter capacity at the time of his recent promotion.

E. B. Ryerson, whose appointment as superintendent terminals of the Canadian National at Black Rock, N. Y., was reported in *Railway Age* of April 10, was born at Brantford, Ont., where he joined the C.N.R. on November 19, 1916, as a checker. Mr. Ryerson is a veteran of World War I, and, upon demobilization, went to Black Rock on January 1, 1919, as a rate clerk. Two years later he was promoted to chief clerk and assistant day yardmaster, following which he became assistant night yardmaster at Fort

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General Balance Sheet — Liabilities

	December 31, 1947	December 31, 1946	Increase	Decrease
Capital Stock:				
Common stock	$222,302,500.00	$222,302,500.00		
Preferred stock	99,591,580.79	99,591,580.79		
Total Capital Stock	$321,894,080.79	$321,894,080.79		
Funded Debt	240,710,232.09	319,891,869.58	.....	$79,181,637.49
Total Capital Stock and Funded Debt	$562,604,312.88	$641,785,950.37	.....	$79,181,637.49
Due to Affiliated Companies	$11,180,098.87	$9,470,009.92	$1,710,088.95	
Current Liabilities:				
Audited accounts and wages payable	$24,826,364.65	$23,814,245.01	$1,012,119.64	
Miscellaneous accounts payable	4,931,811.00	3,684,945.13	1,246,865.87	
Interest matured unpaid:				
Coupons matured, but not presented	492,197.20	1,931,289.84	.....	$1,439,092.64
Coupons and interest on registered bonds, due first proximo	104,277.50	2,191,285.00	.....	2,087,007.50
Dividends matured unpaid:				
Dividends due but uncalled for	293,038.31	336,697.25	.....	43,658.94
Extra dividend on common stock declared January 8, 1914, payable to stockholders of record March 2, 1914, unpaid	115,338.34	118,876.61	.....	3,538.27
Dividend on common stock payable second proximo	12,226,005.00	3,334,365.00	8,891,640.00	
Unmatured interest accrued	1,671,471.96	1,692,014.03	.....	20,542.07
Accrued accounts payable	7,590,046.69	7,289,449.10	300,597.59	
Taxes accrued	50,075,242.78	32,170,473.67	17,904,769.11	
Other current liabilities	4,696,491.98	3,356,353.57	1,340,138.41	
Total Current Liabilities	$107,022,285.41	$79,919,994.21	$27,102,291.20	
Deferred Liabilities	$8,041,593.42	$7,676,282.09	$365,311.33	
Unadjusted Credits:				
Premium on funded debt	$4,923,914.91	$5,250,429.32	.....	$326,514.41
Reserve for fire insurance	15,838,605.05	14,964,846.60	$873,758.45	
Reserve for depreciation—leased property	5,050.57	5,236.42	.....	185.85
Other unadjusted credits	3,828,051.39	33,793,316.66	.....	(c)29,965,265.27
Total Unadjusted Credits	$24,595,621.92	$54,013,829.00	.....	$29,418,207.08
Total Liabilities	**$713,443,912.50**	**$792,866,065.59**	.....	**$79,422,153.09**
Surplus:				
Paid-in surplus	$860.00	$860.00		
Earned surplus—appropriated:				
Additions and betterments	$28,522,352.23	$28,522,352.23		
Funded debt retired through income and surplus	4,323,822.41	3,118,978.66	$1,204,843.75	
Sinking fund reserves	222.50	2,507.50	.....	$2,285.00
Reserve against possible refunds on U. S. Government shipments	2,194,172.98	3,742,146.21	.....	1,547,973.23
Total Earned Surplus—Appropriated	$35,040,570.12	$35,385,984.60	.....	$345,414.48
Earned Surplus—Unappropriated	**$367,170,181.97**	**$338,845,276.91**	**$28,324,905.06**	
Total Earned Surplus	$402,210,752.09	$374,231,261.51	$27,979,490.58	
Total Surplus	$402,211,612.09	$374,232,121.51	$27,979,490.58	
As this consolidated balance sheet excludes all intercompany items, securities of the Los Angeles & Salt Lake Railroad Company and The St. Joseph and Grand Island Railway Company owned by other System companies are not included. The difference between the par and face value of such securities as carried on the books of the issuing companies (less unextinguished discount on the bonds and discount charged to Earned Surplus — Unappropriated but added back in consolidating the accounts) and the amounts at which the securities are carried on the books of the owning companies is set up here to balance	$39,584,547.24	$39,584,547.24		
Grand Total	**$1,155,240,071.83**	**$1,206,682,734.34**	.....	**$51,442,662.51**

(c) Due principally to writing out of these accounts, amounts billed against U. S. Government (not included in Company's income), representing differences between commercial rates and land grants rates on certain freight shipments transported in prior years, because of decisions by U. S. Supreme Court sustaining Government's contention that such shipments were "military or naval property of the United States moving for military or naval and not for civil use," to which land grant rates were applicable under Transportation Act of 1940.

[Advertisement]

Meetings and Conventions

(Continued from page 59)

AMERICAN WOOD-PRESERVERS, ASSOCIATION, —H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O. Spring meeting, April 19-21, 1948, Hotel George Washington, Jacksonville, Fla. Annual meeting, October 18-20, 1948, Hotel Netherland Plaza, Cincinnati, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—J. H. Aydelott, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y. Annual meeting, September 28-30, 1948, Hotel Antlers, Colorado Springs, Colo.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, June 21, 1948, Drake Hotel, Chicago, Ill.

Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, May 24-26, 1948, Chalfonte-Haddon Hall, Atlantic City, N. J.

Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y. Annual meeting, June 8-10, 1948, Hotel Whitcomb, San Francisco, Calif.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 15-17, 1949, Chicago, Ill.

Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, September 14-16, 1948, Hotel Statler, Buffalo, N. Y.

Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 28-30, 1948, Congress Hotel, Chicago, Ill.

Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September, 1948, Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June 28-30, 1948, Palmer House, Chicago, Ill.

Freight Claim Division.—Lewis Pilcher, (Executive Vice-Chairman), 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, May 11-13, 1948, McAllister Hotel, Miami, Fla.

Motor Transport Division.—Transportation Bldg., Washington 6, D. C.

Car Service Division.—W. C. Kendall, Chairman, Transportation Bldg., Washington 6, D. C.

Finance Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, June 29-July 1, 1948, Hotel Cleveland, Cleveland, O.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, September 13-15, 1948, French Lick Springs Hotel, French Lick, Ind.

Traffic Department.—Walter J. Kelly, Traffic Officer, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Gulf, Mobile & Ohio R. R., 340 W. Harrison St., Chicago 7, Ill. Annual meeting, May 19-21, 1948, French Lick Springs Hotel, French Lick, Ind.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill. Exhibit in conjunction with meeting of the American Railway Bridge and Building Association, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel DeSota, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—W. E. Angier, chief A. A. R. clerk, C. B. & Q. R. R., 547 W. Jackson Blvd., Chicago 6, Ill. Regular meetings, second Monday of each month except June, July and August, LaSalle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

CHICAGO LUNCHEON CLUB OF MILITARY RAILWAY SERVICE VETERANS.—Col. R. O. Jensen, Schiller Park, Ill. Luncheon, second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, Ill.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting September 20-23, 1948, Hotel Sherman, Chicago, Ill.

MAINTENANCE OF WAY CLUB OF CHICAGO.—C. R. Knowles, Room 2000, 105 W. Adams St., Chicago 3, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, when the third Monday, Hardings at the Fair.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, Ill.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in October, December, February and April.

MILITARY RAILWAY SERVICE VETERANS.—S. Thomson, 1061 W. Sheridan Road, Chicago 40, Ill. Annual reunion, September 25, 1948, Jefferson Hotel, St. Louis, Mo.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, November 15-18, 1948, Hotel Oglethorpe, Savannah, Ga.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—F. J. Armstrong, United States Radiator Corporation, 1500 United Artists Bldg., Detroit, Mich. Annual meeting, October 5, 1948, Jefferson Hotel, St. Louis, Mo.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 18-19, 1948, Hotel Pennsylvania, New York, N. Y.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—R. B. Fisher, Suite 2414, 1 N. La Salle St., Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION.—E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box 458, San Rafael, Calif. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Calif.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo. Annual meeting, August 30-September 1, 1948, Greenbriar Hotel, White Sulphur Springs, W. Va.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elsie LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—P. J. Climer, Acting Sec'y, N. C. & St. L. Ry., Nashville, Tenn.

TORONTO RAILWAY CLUB.—D. L. Chambers, Acting Sec'y. P. O. Box 8, Terminal "A", Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK & SUPPLY ASSOCIATION. — Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill. Exhibit in conjunction with meeting of the Roadmasters and Maintenance of Way Association, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

CONSTRUCTION

Butte, Anaconda & Pacific.—This road, in improving its facilities for loading ore at its Butte Hill yard, is constructing a 1,400-ft. track and installing overhead electrification. This project is part of an improvement program undertaken for the purpose of serving new requirements of the Anaconda Copper Mining Company at its Butte and Anaconda (Mont.) mines. The B. A. & P. recently completed a 3.91-mi. spur, extending from Silica on the main line, northerly to Slime Ponds. A 3,034-ft. siding and a 1,014-ft. auxiliary connection to the main line have also been constructed. The work in connection with this latest project is being performed by the road's forces, with the exception of grading, a contract for which has been awarded to the F. & S. Contracting Company of Butte.

Smithfield Terminal. — Division 4 of the Interstate Commerce Commission has further extended to October 15 the time within which this road will be required to complete the construction of trackage in the vicinity of Smithfield, Va., which will be used in connection with car floats on the James river operating to

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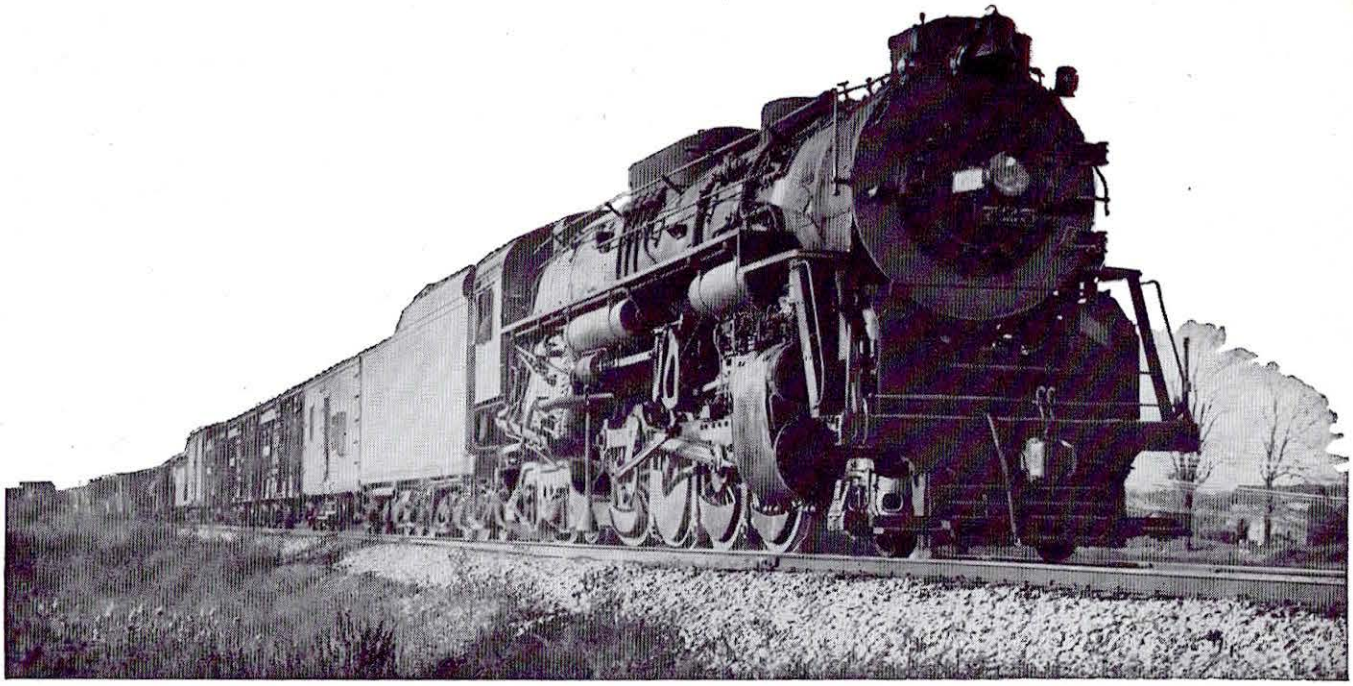

Steam trains are making 2,000,000 miles a day

While the spotlight of public attention naturally falls on newest developments, it is sometimes well to back off and take a look at the overall picture.

We're thinking of the steam locomotive. These locomotives are making better than two million train-miles today — and will do it again tomorrow and the next day. They — these steam locomotives — are producing more revenue ton-miles right now than ever before in peacetime history.

Many of these locomotives are old, too old, and have distorted the statistics on performance. Many, however, are modern. And on modern steam power — locomotives that pack 5000 to 9000 horsepower and can stay on the road for 16 and 18 hours, and then turn around in an hour or two — the statistics look pretty good.

We build such modern power — and are convinced that it has its place.

LIMA HAMILTON CORPORATION

DIVISIONS: *Lima, Ohio* — Lima Locomotive Works Division; Lima Shovel and Crane Division. *Hamilton, Ohio* — Hooven, Owens, Rentschler Co.; Niles Tool Works Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

and from the terminal of the Chesapeake & Ohio at Newport News. The commission previously had extended the time limit from June 15, 1947, to April 15.

Canadian National—A contract has been awarded by this company to Swanson, Benson Company, Ltd., of Winnipeg, Man., for the erection of a 10,000-ton ice house at the road's yards in Transcona, Man.

ABANDONMENTS

Chicago, Burlington & Quincy. — This company has requested Interstate Commerce Commission authority to abandon part of its Oberlin branch from a point near Republican City, Neb., to a point near Long Island, Kans., 15 miles, and to construct and operate in lieu thereof a 12-mile line extending from a point near Long Island to a point near Orleans, Neb. The line is being relocated because of a federal flood control project. Cost of constructing the new line will be borne by the federal government.

FINANCIAL

Illinois Central. — *Resumes Preferred Dividend.*—This road has declared a dividend of $3 a share on the 6 per cent non-cumulative preferred stock, payable on May 15 to stockholders of record on April 28. The previous payment on this issue was $6 a share on September 1, 1931.

New Jersey & New York.—*Reorganization.* — Division 4 of the Interstate Commerce Commission has fixed $10,000 as the reasonable interim allowance to be paid to W. T. Margetts, Jr., counsel for the trustee of this road, as compensation for services rendered for the trustee (including such services as were rendered by the firm of McLanahan, Merritt & Ingraham in assisting Mr. Margetts) during the period from January 17, 1947, to February 1, 1948, inclusive.

New York, New Haven & Hartford.—*Boston Terminal Reorganization.*—Making a proposed report with respect to the reorganization of the Boston (Mass.) Terminal Company, which is controlled by the New Haven and the New York Central, Examiner H. H. Wilkinson has recommended that the Interstate Commerce Commission authorize foreclosure by the mortgage trustee on the mortgage of the terminal company's property, including South Station in Boston, and its sale at not less than $9,0[illegible]0,000, subject to the condition that the property could only be sold to a party qualified and undertaking to operate it. The examiner said the foreclosure is necessary so the bondholders can establish the deficiency claim which railroads using the terminal are obligated to pay under the Massachusetts law that required them to use the facilities. According to the report, $15,155,000 of the debtor company's bonds were outstanding as of last September 30, excluding $4,383,170 in accrued and unpaid interest.

The examiner said that if the commission approves the plan as recommended and if it were carried out, the trustee would be forced to abandon operation of the terminal. He added, however, that since the implied authority for abandonment is conditioned on the purchaser obtaining authority for continued operation, it seems unnecessary at this time for the commission to act on an abandonment application, which was also filed by the mortgage trustee. The examiner said that the terminal is being used by several million passengers annually, and that no arrangements have been effected to accommodate them if the terminal were abandoned.

Reading.—*Control of Leased Lines.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire, through stock ownership, control of the Catawissa and the Little Schuylkill Navigation, Railroad & Coal Company, both of which have been operated under lease by the Reading for many years. At the same time, the commission authorized the Catawissa to extend from April 1 to April 1, 1968, the maturity date of not exceeding $2,215,000 of 50-year 4 per cent gold first mortgage consolidated bonds. The Reading has been authorized to assume liability for the payment of principal and interest on the bonds, which will bear interest at the rate of 3¾ per cent annually during the extended period.

The Reading, meanwhile, also has applied to the commission for authority to acquire, through stock ownership, control of three other leased lines — the Mill Creek & Mine Hill Navigation & Railroad Co., the Mount Carbon & Port Carbon and the Schuylkill Valley Navigation & Railroad Co.

New Security Issues

The following **applications** have been filed with the Interstate Commerce Commission for authority to issue new securities:

Baltimore & Ohio.—To assume liability for $4,500,000 of series Y equipment trust certificates, the proceeds of which will be applied toward the purchase of the following equipment:

Description and Builder	Estimated Unit Price
270 70-ton open-top steel hopper cars (Pullman-Standard Car Manufacturing Co.)	$4,175
600 70-ton open-top steel hopper cars (Bethlehem Steel Co.)	4,530
400 70-ton open-top steel hopper cars (Pressed Steel Car Co.)	4,471

The certificates would be dated May 1, sold on the basis of competitive bidding, and would mature in 10 annual installments of $450,000, starting May 1, 1949.

Pennsylvania-Long Island.—To jointly assume liability for $4,035,000 of series K equipment trust certificates, part of a proposed overall issue of $9,480,000 of series K certificates, the proceeds of which will be applied toward the purchase of the following equipment to be used by the Long Island:

Description and Builder	Estimated Unit Price
4 660-hp. Diesel-electric switching locomotives (Baldwin Locomotive Works)	$ 78,500
1 1,000-hp. Diesel-electric switching locomotive (Baldwin)	100,500
18 660-hp. Diesel-electric switching locomotives (American Locomotive Co.)	78,500
10 1,000-hp. Diesel-electric switching locomotives (Alco)	100,500
5 1,000-hp. Diesel-electric switching locomotives, each equipped with steam heating boilers (Alco)	122,000

Proceeds from the sale of the certificates also will be applied toward the cost of 60 double-deck passenger motor cars, including 10 which already have been delivered. The cars, estimated to cost $143,000 each, are being built in the Pennsylvania's own shops. The certificates will be dated May 1, will be sold on the basis of competitive bidding, and will mature in 15 annual installments of $632,000.

Union Terminal (Dallas, Tex.).—To issue and sell $4,833,000 of first mortgage bonds, the proceeds of which would be applied toward the redemption of a like amount of first mortgage 3¾ per cent bonds, due February 1, 1967. The proposed issue would be dated June 1, would bear interest at a rate to be determined by competitive bidding, and would mature June 1, 1978.

Division 4 of the I.C.C. has **authorized** issuance of these securities:

Bangor & Aroostok.—To assume liability for $700,000 of series M 2⅛ per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment as reported in *Railway Age* of March 20, page 106. The certificates will be dated April 15 and will mature in 10 annual installments of $70,000, starting April 15, 1949. The report also approves a selling price of 98.612 with a 2⅛ per cent interest rate, the bid of R. W. Pressprich & Co., on which basis the average annual cost will be approximately 2.41 per cent.

Central of New Jersey-Central of Pennsylvania.—To jointly assume liability for $1,395,000 of C. of Pa., series A equipment trust certificates, the proceeds of which will be applied toward the purchase of 15 1,500-hp. Diesel-electric road freight locomotive units, as reported in *Railway Age* of January 10, page 55. The equipment, estimated to cost $1,860,000, will be acquired from the Baldwin Locomotive Works. The certificates will be dated April 15 and will mature in 15 annual installments of $93,000, starting April 15, 1949. The report also approves a selling price of 99.189 with a 2⅝ per cent interest rate, the bid of Halsey, Stuart & Co., on which basis the average annual cost will be approximately 2.75 per cent.

Chesapeake & Ohio.—To assume lia-

News Department continued on next left-hand page

Each individual locomotive should earn a profit, and to make it possible to do so the locomotive must be kept in condition for maximum utilization.

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To make available all the power the locomotive is capable of producing — and to get the utmost value from every ton of coal burned — the maintenance of a 100% brick arch in the firebox is essential.

The heavier the train and the higher the speed, the greater are the gains from keeping the arch complete. Whatever the type of locomotive, a Security Sectional Arch assures long service with low maintenance costs.

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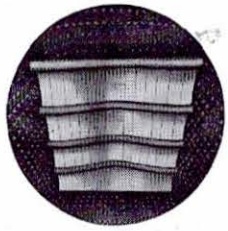


AMERICAN ARCH CO. INC.
60 East 42nd Street, New York 17, N.Y.
Locomotive Combustion Specialists

bility for $5,500,000 of 2⅛ per cent equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment estimated to cost $6,969,320, as described in *Railway Age* of April 3, page 65. The certificates will be dated April 15 and will mature in 10 annual installments of $550,000, starting April 15, 1949. The report also approves a selling price of 99.556 with a 2⅛ per cent interest rate, the bid of Harris, Hall & Co., and associates, on which the average annual cost will be approximately 2.21 per cent.

Average Prices Stocks and Bonds

	April 27	Last week	Last year
Average price of 20 representative railway stocks	52.41	51.41	44.86
Average price of 20 representative railway bonds	88.77	88.43	89.14

Dividends Declared

Atlantic Coast Line.—$1.00, payable June 14 to holders of record May 19.

International of Central America.—5% preferred (accum.), $1.25, payable May 15 to holders of record May 5.

RAILWAY OFFICERS

EXECUTIVE

William R. Devenish, whose retirement as vice-president of the Canadian National's Western region, with headquarters at Winnipeg, Man., was reported in *Railway Age* of April 17, was born in Ireland on November 21, 1882, and was educated at St. Columbus College and Trinity College, Dublin. After previous experience as an engineer in railway work, he engaged in construction activities with the Transcontinental railway in 1912, and the following year became division engineer for the Intercolonial at Moncton, N. B. After holding supervisory posts at Campbellton, N. B., and Moncton, he was appointed general superintendent for the C. N. at Toronto, Ont., and later at North Bay, Ont. In 1928, Mr. Devenish became general superintendent of the Alberta district, with headquarters at Edmonton, Alta., and in 1936 he was appointed general superintendent of transportation for the Western region. He was advanced to general manager of the Western region in 1939 and to vice-president and general manager in 1942. He relinquished the title of general manager in 1944.

Willis T. Pierson, whose appointment as vice-president and general counsel of the Erie at Cleveland, Ohio, was reported in *Railway Age* of April 24, was born at Clinton, Iowa, and received his public school education in Milwaukee, Wis. He was graduated from the University of Michigan with the degree of LL.B. and joined the Erie in 1917 as a tax clerk in the land and tax department, being appointed chief clerk of that department later in the same year. In January, 1918, Mr. Pierson became special agent of the land and tax department. Just before he entered the Army during World War I he was appointed assistant land and tax agent, holding that position until 1919, when he became chief land appraiser in the valuation department at New York. In 1928 he was advanced to valuation and commerce attorney and in 1937 he became general attorney at Cleveland. Mr. Pierson was promoted to assistant general counsel in 1941 and to general solicitor in 1945. He became general counsel on October 1, 1946, which title he still holds in addition to his recent appointment as vice-president.

F. H. Shaffer, general manager of the St. Louis-San Francisco, at Springfield, Mo., has been promoted to vice-president in charge of operations, with headquarters at St. Louis, Mo.

OPERATING

A. R. Wilson, whose appointment as superintendent of the Capreol division of the Canadian National at Capreol, Ont., was reported in *Railway Age* of April 10, was born at Yarmouth, N. S., and commenced his railway career on May 20, 1919, as a clerk with the C.N.R. at Liverpool, N. S. He subsequently served in various positions in the Maritime Provinces until 1929, when he became relieving agent, Central region, at Sanmaur, Que. Mr. Wilson later served in various capacities until February, 1942, when he became assistant superintendent of the Cochrane division, being transferred to Quebec, Que., in July, 1943; and to Lindsay, Ont., in July, 1944. In February, 1947, he became assistant superintendent of the Belleville division at Belleville, Ont., and following the illness of the divisional superintendent, was appointed acting superintendent, which position he held until his recent appointment.

George A. Voelkner, general superintendent of the Chicago & Western Indiana and the Belt Railway of Chicago, at Clearing, Ill., has been appointed general manager at that point. Mr. Voelkner's former position has been abolished.

Reginald Hayes, whose appointment as general superintendent of the Northern Ontario district of the Canadian National at North Bay, Ont., was reported in *Railway Age* of April 10, was born at Halifax, N. S., and entered the service of the Canadian National on August 1, 1915. Mr. Hayes served in various capacities at Moncton, N. B., until December, 1918, when he went to Montreal, Que., as secretary. The following year he was promoted to chief clerk to the general manager. In March, 1923, he was appointed assistant chief clerk to general manager at Toronto, being promoted to chief clerk in July, 1927. Mr. Hayes was promoted to superintendent of the Hornepayne division in June, 1938, subsequently being transferred to the St. Thomas division, and to the Ottawa division in July, 1944. He became superintendent of the Montreal terminals and St. Jerome divisions at Montreal in March, 1946, which position he held until his recent promotion.

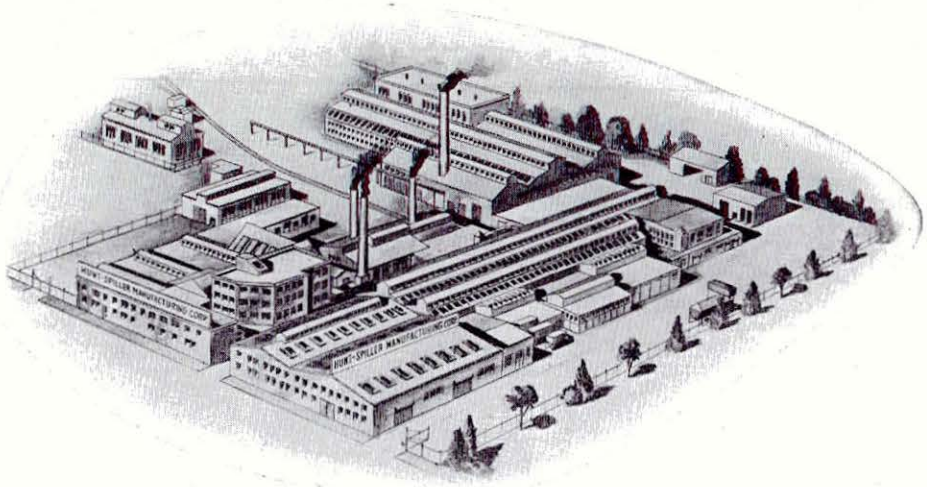
Jack T. Stotler, whose promotion to division superintendent of the Northern Pacific, with headquarters at Fargo, N. D., was reported in *Railway Age* of April 3, was born at Tacoma, Wash., on May 27, 1905. He received his higher education at Washington State College, at Pullman, Wash., having been awarded a degree in mechanical engineering in 1928. Shortly thereafter, Mr. Stotler joined the N. P.'s engineering department at Seattle, Wash., remaining with that department until 1933,

Jack T. Stotler

when he became assistant supervisor of maintenance of the Camas Prairie (controlled jointly by the N. P. and the Union Pacific). Between the years 1935 and 1943, Mr. Stotler held positions on the N. P. successively as roadmaster at Helena, Mont.; roadmaster, Lester, Wash.; division roadmaster, Spokane; roadmaster-trainmaster, East Grand Forks, Minn.; and trainmaster, Yellowstone division, Dickinson, N. D. He became superintendent of ore operations at Superior, Wis., in 1943, and assistant superintendent at Fargo, N. D., in 1946. He was serving in the latter capacity at the time of his recent promotion.

E. B. Ryerson, whose appointment as superintendent terminals of the Canadian National at Black Rock, N. Y., was reported in *Railway Age* of April 10, was born at Brantford, Ont., where he joined the C.N.R. on November 19, 1916, as a checker. Mr. Ryerson is a veteran of World War I, and, upon demobilization, went to Black Rock on January 1, 1919, as a rate clerk. Two years later he was promoted to chief clerk and assistant day yardmaster, following which he became assistant night yardmaster at Fort

News Department continued on next left-hand page



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Valve Bushings	Floating Rod Bushings	(Duplex Springs for Above
Valve Packing Rings	Light Weight Valves	Sectional Packing)
Valve Bull Rings	Cylinder Liners and Pistons	Cylinder Snap Rings
	for Diesel Service	Valve Rings, All Shapes

Erie, Ont., in January, 1924. Mr. Ryerson subsequently became night yard master and assistant yardmaster at the latter point, until January, 1941, when he became yardmaster at Niagara Falls, Ont. The following year he was promoted to general yardmaster and on July 10, 1943, he became terminal trainmaster at Windsor, Ont. On October 3, 1944, he became assistant superintendent at Palmerston, Ont., being transferred to the London division at London, Ont., on May 22, 1947. Mr. Ryerson was appointed acting superintendent of terminals at Black Rock on October 1, 1947, which position he held until his recent appointment.

S. J. Frazier, assistant general manager of the St. Louis-San Francisco, at Springfield, Mo., has been promoted to general manager at that point, succeeding **F. H. Shaffer,** who has been promoted to vice-president in charge of operations, at St. Louis, Mo. **R. J. Stone,** assistant general manager, Western District, at Springfield, has been placed in charge of the Eastern District, with the same headquarters. **L. B. Clary,** assistant to president at St. Louis, has been appointed assistant general manager, to be in charge of the Western District.

Len Mayrisch, office manager in the offices of the vice-president—operations and general manager of the Southern Pacific at San Francisco, Cal., has been appointed to the newly created position of manager of freight protection and station service, with headquarters remaining in San Francisco. **E. W. Powers,** superintendent of freight protection, has been appointed assistant manager of freight protection service. Mr. Mayrisch is succeeded by **Philip M. Chaimov,** supervisor of station service.

TRAFFIC

Thomas J. Boston, general agent of the Missouri-Kansas-Texas at Fort Worth, Tex., has been transferred to St. Louis, Mo., succeeding the late **T. K. Thornton.**

W. H. Happ, general agent, passenger department, of the Canadian National, with headquarters at Kansas City, Mo., has been transferred to San Francisco, Cal., succeeding **W. A. Tuxford,** who has retired. **F. S. Benoliel,** traveling passenger agent at Cincinnati, Ohio, has been appointed general agent at Kansas City.

George C. Heidish has been appointed traffic manager-sales and service of the Akron, Canton & Youngstown, with headquarters at Akron, Ohio. The position of assistant to vice-president— traffic has been abolished.

K. H. Newinger, agent of the Canadian Pacific at Calgary, Alta., has been appointed general agent at Winnipeg, Man., succeeding **J. W. Dow,** who has retired on pension after more than 42 years of service.

FINANCIAL, LEGAL and ACCOUNTING

Merritt Johnson, whose appointment as manager of the Southern Pacific's real estate department, with headquarters at San Francisco, Cal., was reported in *Railway Age* of April 3, was born on November 16, 1898. He began his career with the S. P. as a junior clerk in the road's general accounting department at San Francisco in 1914, and subsequently held various clerical positions in that department until 1919, when he was

Merritt Johnson

transferred to the lease agent's office. He served successively as general clerk, real estate agent, land agent and assistant to lease agent, becoming assistant lease agent in 1942 and assistant manager of the real estate department in 1945. On January 15, 1946, Mr. Johnson was appointed district manager of the real estate department at Los Angeles, which post he held until his recent appointment.

ENGINEERING and SIGNALING

G. L. Plow, division engineer of the Canadian National at Levis, Que., has been transferred to the London division at London, Ont., succeeding **J. Ferguson,** promoted.

Howard M. Shepard, whose appointment as assistant to chief engineer of the Erie at Cleveland, Ohio, was reported in the *Railway Age* of March 27, was born on March 28, 1894, at Nutley, N. J. After attending the public schools of Nutley and Newark Technical College, Mr. Shepard entered railroad service in October, 1912, as rodman with the Erie at Disko, Ind., in which capacity he served until July 1, 1914, when he became chief of party, state of New Jersey engineering forces, at Bayonne, N. J. On January 1, 1916, Mr. Shepard became locating engineer of the Erie, serving in various locations until January 1, 1931, when he became assistant chief draftsman at Cleveland. He was promoted to chief draftsman there on April 1, 1941, and served in that capacity until April 1, 1942, when he joined the U. S. Army Transportation Corps and served in the Southwest Pacific area until November 1, 1946. He then returned to the Erie as assistant engineer at Cleveland, where he remained until his recent promotion to assistant to chief engineer.

Herbert G. Dennis, whose promotion to district maintenance engineer of the Chicago, Rock Island & Pacific, at Kansas City, Mo., was reported in *Railway Age* of March 20, was born on May 23, 1900, at Savanna, Ill. He began his career in the Rock Island's engineering department in 1924, and from 1929 to 1934 he served as roadmaster and track supervisor on the road's Des Moines division. Mr. Dennis next held positions, successively, as master carpenter, division engineer and district bridge engineer. Following military service from 1942 to 1946, he returned to the Rock Island as division engineer at Des Moines, Iowa, which post he held at the time of his recent appointment.

SPECIAL

R. J. Murray, whose promotion to chief special agent of the Great Northern, at St. Paul, Minn., was reported in *Railway Age* of April 17, entered the employ of the G.N. as a section worker and towerman. He became a watchman for the road at Moorhead, Minn., in

R. J. Murray

1924, advancing to assistant special agent at St. Cloud, Minn., in 1926, and to special agent at Willmar, Minn., in 1928. He served as special agent at Great Falls, Mont., for a short time during 1931, returning to Willmar late in that year, where he remained until the time of his recent appointment.

Walter J. O'Maley, whose appointment as general manager of the Mid-Central department of the Railway Express Agency, with headquarters at Chicago, was reported in *Railway Age* of April 17, began his express career at Lynn, Mass., in 1910. In 1916 he transferred

News Department continued on next left-hand page

IT'S THE *New* RACOR No. 22 HEAVY DUTY
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In exhaustive research tests at Mahwah, New Jersey Brake Shoe Laboratories, this new stand was thrown automatically 100,000 times and manually 20,000 times.

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to Boston, Mass., where he held various supervisory positions continuously, with the exception of a period of military service during World War I. Beginning in 1936, Mr. O'Maley served successively as chief clerk to general man-

Walter J. O'Maley

ager, division superintendent at Boston and Albany, N. Y., and superintendent of organization at New York. In 1945 he was appointed superintendent of the Boston city division, which post he held at the time of his recent appointment.

OBITUARY

James G. Shannon, who retired on April 1 as general manager of the Mid-Central department of the Railway Express Agency, at Chicago, died at the Presbyterian hospital in that city on April 20, following a lingering illness. A biographical sketch of Mr. Shannon appeared in *Railway Age* of April 24, in connection with his retirement.

T. K. Thornton, general agent of the Missouri-Kansas-Texas at St. Louis, Mo., died recently.

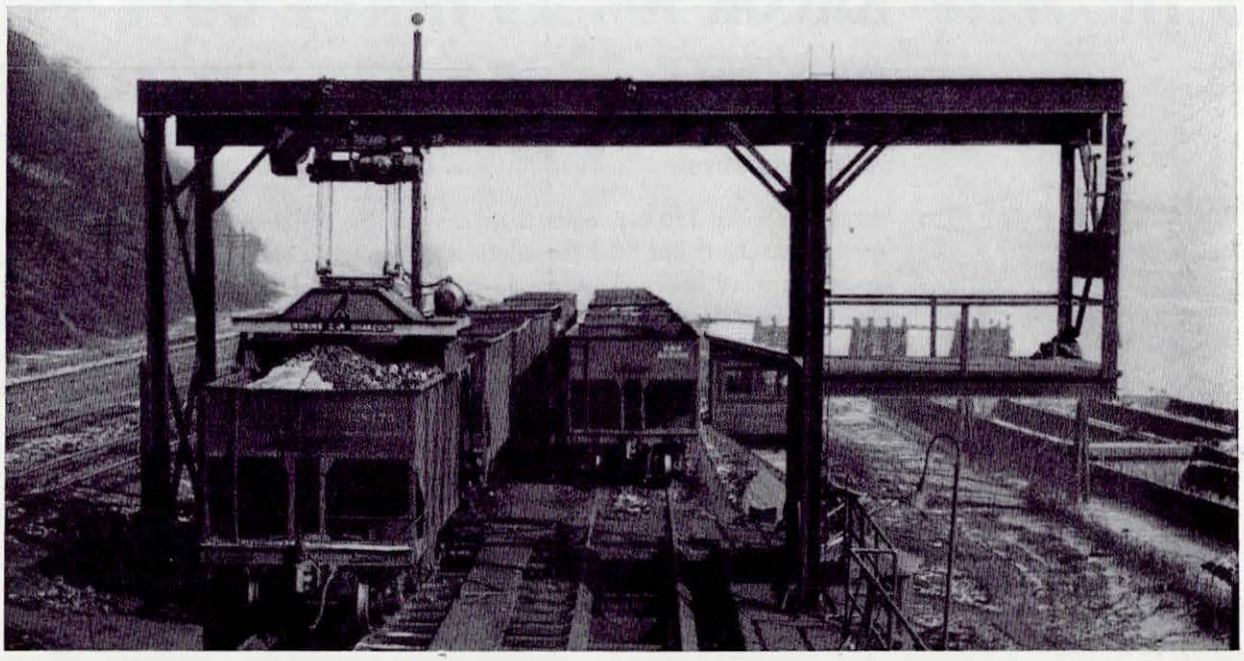
Walter W. Burrell, special representative to the general manager, Western region, of the Pennsylvania, with headquarters at Chicago, died at Passavant Memorial hospital in that city on April 20.

William Hewer Rochester, chief engineer of the Gulf, Colorado & Santa Fe at Galveston, Tex., died in St. Mary's hospital in that city on April 25, following an illness of several weeks.

Harry A. Krause, assistant general passenger agent of the Reading, with headquarters at Philadelphia, Pa., died on April 23 at the age of 56.

George Werner Imgrund, retired vice-president of the Chicago & Illinois Midland, at Springfield, Ill., died in that city on April 24, following a heart attack. Mr. Imgrund, whose retirement was reported in *Railway Age* of April 17, was born on February 18, 1883, at Springfield, and entered railway service in 1897 as a machinist apprentice on the Wabash. Four years later, when he completed his apprenticeship on the Wabash, he became a machinist for a manufacturer at Springfield, re-entering railway service in 1902 as a machinist on the Baltimore & Ohio, at Newark, Ohio. From December, 1902, until February, 1927, he served successively as roundhouse foreman on the B. & O. at Lorain, Ohio, and New Castle, Pa., as mechanical inspector on the Lake Shore & Michigan Southern (now part of the New York Central), as a machinist on the Wabash, as erecting foreman at Springfield, and a roundhouse foreman at Chicago and Decatur, Ill., as general foreman of the locomotive and car departments and as master mechanic of the Chicago, Peoria & St. Louis at Jacksonville, Ill. On February 1, 1927, Mr. Imgrund was appointed master mechanic of the Chicago & Illinois Midland, and served in that capacity until November, 1930, when he was promoted to superintendent of motive power and equipment. On January 1, 1932, he was further advanced to superintendent of the transportation, car, and locomotive departments, which position he retained until June, 1940, when he was promoted to general superintendent. Mr. Imgrund was elected vice-president of the road in December, 1946.

Max J. Wegener, chief special agent of the Great Northern, with headquarters at St. Paul, Minn., whose death was reported in *Railway Age* of April 17, was born at South Bend, Ind., on September 24, 1884. He began his railroad career in 1911, as a special officer with the Chicago & North Western at Chicago, and for a time during 1913 was employed as a clerk with the Pennsylvania. Mr. Wegener returned to the North Western as special officer in October, 1913, remaining with that road until 1915, when he joined the G. N. as assistant special agent at Superior, Wis. He was advanced to special agent at Superior in 1918, and subsequently held that post at a number of points on the railroad. He was promoted in 1937 to chief special agent, the position he held at the time of his death.



NEW COAL CAR "SHAKE-OUT" INSTALLED BY B&O AT PITTSBURGH DOCK — First machine of its type to be placed in service on the Baltimore & Ohio is this Robbins car "shake-out" at Glenwood Dock, installed to facilitate the unloading of coal from hopper cars. With men working atop the cars to keep the coal moving, only three to four cars can be dumped in one hour, but the machine will be able to empty ten to fourteen cars in the same time

Current Publications

PAMPHLETS

Locomotives of the L.N.E.R., by O. S. Nock. Second Impression (revised). 68 pages. Published by the London & North Eastern Railway, 26, Pancras road, London, N. W. 1, England. Price 2s. 9½d.

An introductory session discusses the L.N.E.R. system of engine classification, its policy up to the outbreak of war, the wartime problem, and standardization and the need for a "general utility" engine. This is followed by brief outlines of the new standard types and the non-standard types to be maintained. The pamphlet also contains a number of locomotive illustrations and drawings, a table of L.N.E.R. locomotive classes, a summary of the 1946 renumbering scheme and a list of engine names.

Recent Argentine Railway Developments, by Joseph L. Apodaca and Vincent Russo. 4 pages. Issued by the Office of International Trade, United States Department of Commerce. Available from the Government Printing Office, Washington 25, D. C. Price five cents.

The authors compare the Argentine Railway situation in 1941 and 1946. Subjects covered include rolling stock, and physical characteristics. Some discussion is also included of international railroad junctions, the history of Argentine railways and the acquisition by Argentina of foreign-owned lines.

Railways of the Republic of the Philippines, by Seymour T. R. Abt. 2 pages. Issued by the Office of International Trade, United States Department of Commerce. Available from the Government Printing Office, Washington 25, D. C. Price, five cents.

The two common-carrier railway systems which serve the Philippines are discussed briefly in this report. They are the Manila Railroad, serving the island of Luzon, and the Philippine Railway Company serving the island of Panay. Prior to the war it also served the island of Cebu. Brief mention is made of their postwar condition and rolling stock, and comparisons noted of prewar and postwar traffic and rates.

Effect on the Domestic Economy of Purchasing Freight Cars for Export, by Marjory Ericsson. 18 pages. Published by the American Enterprise Association, 4 E. 41 St., New York 17. Price 50 cents.

This study is one of a series which examines the effects on the domestic economy of purchasing commodities for export, undertaken for the use of the House select committee on foreign aid in the preparation of committee reports. This analysis of the freight car situation is divided into three parts; the need for freight cars in the United States, the effect the export of freight cars to Europe has on the domestic car production, and how the problem of adequate export and domestic freight car production may be resolved.

The South African Railways; History, Scope and Organization. 124 pages, illustrations, maps. Published by Authority of the General Manager, South African Railways, and prepared by the Public Relations Department, Johannesburg, South Africa.

The history and growth of the organization which, in addition to railways, covers shipping, road motor services, ports and harbors, airways and a multitude of other subsidiary activities, are presented in this little book. Beginning with the historical background, it discusses evolution of state ownership, managerial control, railway finances, commercial and industrial activities, the engineering departments, the operating department, harbors and shipping, and airways. Selected railway, harbor and airway statistics are included.

BOOKS

The Milwaukee Road; Its First Hundred Years, by August Derleth. 330 pages, illustrations. Published by Creative Age Press, 14 E. 44 St., New York 17. Price $4.

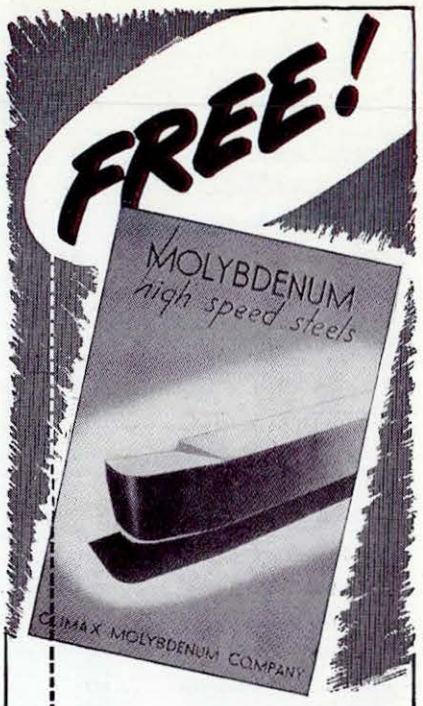
This is the third volume in the Railroads of America Series issued by this publisher. The first two were "Steelways of New England" and "The Road of the Century." This one is devoted to the Chicago, Milwaukee, St. Paul & Pacific and its predecessor companies, and covers its history, financial operations and expansion. Included are a very complete corporate history of the constituent companies, and a chronological history of development of the Milwaukee road with key to constructing and predecessor companies. This chronological history also includes extensive statistics relating to the railroad. A five-page bibliography and a 14-page index include the book.

The Diary and Sundry Observations of Thomas Alva Edison, edited by Dagobert D. Runes. 247 pages, illustrations. Published by the Philosophical Library, 15 E. 40th St., New York 16. Price, $4.75.

The editor has endeavored, in this volume, to present to the reader a selection of Edison's social and philosophic ideas taken from the available notes, statements and observations of the inventor. Part I of the book is the diary, and Part II, the sundry observations. These are grouped as follows: autobiographical, motion pictures and the arts, war and peace, education and work, the philosophy of Paine, man and machine, for a better world, and the realms beyond.

Proceedings of 43rd Annual Meeting of the American Wood-Preservers' Association. 536 pages, illustrations. Published by the American Wood-Preservers' Association, 1427 Eye Street, N.W., Washington 5, D. C.

The papers and reports presented at the 1947 meeting of the association are included in this bound volume of proceedings. The committee reports and some of the papers were abstracted in *Railway Age* of May 3, 1947, pages 882 to 885. Included also are the wood preservation statistics for 1946, a list of wood preserving plants, a membership list and a membership classification list.



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Freight Operating Statistics of Large Steam Railways—Selected

Region, road and year		Miles of road operated	Locomotive-miles: Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross excl.locos. & tenders	Ton-miles (*thousands*): Net-rev. and non-rev.	Road locos. on line: Serviceable: Unstored	Road locos. on line: Serviceable: Stored	Road locos. on line: B. O.	Road locos. on line: Per cent B. O.
New Eng. Region													
Boston & Albany	1948	362	128,501	141,962	27,722	2,592	69.2	159,378	68,031	59	..	28	32.2
	1947	362	151,879	169,201	25,721	3,533	65.8	216,616	86,595	63	..	26	29.2
Boston & Maine	1948	1,746	332,263	343,027	15,118	11,146	71.8	689,779	299,301	106	..	8	7.0
	1947	1,750	334,181	346,868	14,699	12,172	71.4	748,614	328,660	111	20	14	9.7
N. Y., N. H. & Htfd	1948	1,815	339,580	635,474	59,362	12,094	74.6	703,350	321,847	188	7	37	15.8
	1947	1,815	403,151	546,004	49,170	14,955	70.7	877,770	380,269	191	7	45	20.2
Great Lakes Region													
Delaware & Hudson	1948	794	288,397	343,843	33,926	11,555	68.4	824,889	444,157	123	21	34	19.1
	1947	794	305,349	366,691	37,149	12,912	69.2	918,808	497,198	127	32	35	18.0
Del., Lack. & Western	1948	970	330,194	371,067	46,522	12,453	69.5	819,605	372,062	122	2	18	12.7
	1947	971	337,836	381,204	44,273	13,899	69.5	909,353	413,658	109	16	51	29.0
Erie	1948	2,229	711,004	751,484	60,587	34,641	69.5	2,206,545	956,497	262	20	83	22.7
	1947	2,229	767,484	815,320	64,078	36,851	67.6	2,389,546	1,034,988	266	35	85	22.0
Grand Trunk Western	1948	972	282,433	289,393	2,451	8,520	70.4	537,757	234,473	67	..	7	9.5
	1947	972	274,580	285,471	2,352	8,895	70.4	554,516	244,513	69	..	9	11.5
Lehigh Valley	1948	1,239	318,361	351,208	46,568	12,530	70.3	832,422	404,163	105	8	39	25.7
	1947	1,242	323,130	356,468	57,218	14,223	69.4	955,543	463,100	114	14	41	24.1
New York Central	1948	10,351	3,169,060	3,401,947	257,821	109,550	64.9	7,575,999	3,604,832	1,059	9	315	22.8
	1947	10,338	3,364,841	3,607,632	247,410	124,715	63.6	8,683,385	4,063,733	1,062	15	331	23.5
New York, Chi. & St. L.	1948	1,656	690,509	679,886	9,183	25,765	70.1	1,638,164	736,720	148	..	18	10.8
	1947	1,656	668,004	671,860	9,277	25,937	68.7	1,675,233	747,466	143	1	17	10.6
Pitts. & Lake Erie	1948	223	107,418	109,737	189	1,994	64.4	335,244	194,439	33	..	11	25.0
	1947	223	193,868	105,445	44	4,127	63.9	343,307	196,737	30	..	15	33.3
Wabash	1948	2,381	657,871	676,926	16,334	22,946	73.2	1,441,966	650,185	157	15	30	14.9
	1947	2,381	649,239	668,448	16,299	23,410	73.3	1,472,315	678,332	55	8	43	20.9
Central Eastern Region													
Baltimore & Ohio	1948	6,076	2,092,031	2,598,925	306,682	67,685	65.4	4,920,171	2,470,937	858	2	276	24.3
	1947	6,103	2,097,402	2,608,820	293,183	69,806	64.2	5,062,725	2,499,182	846	2	312	26.9
Central of New Jersey*	1948	418	80,889	86,637	9,691	3,042	66.4	225,784	118,394	44	..	17	27.9
	1947	419	88,562	98,825	16,165	3,127	66.5	224,945	116,306	45	3	30	38.5
Central of Pennsylvania	1948	213	78,380	89,935	16,298	2,942	70.7	214,187	118,405	43	..	13	23.2
	1947	213	85,623	102,696	22,740	3,140	68.1	227,287	123,239	50	1	23	31.1
Chicago & Eastern Ill.	1948	909	182,668	183,220	4,268	5,535	70.9	371,965	189,326	57	..	12	17.4
	1947	910	191,609	193,519	3,674	5,470	71.2	365,309	186,583	60	..	16	21.1
Elgin, Joliet & Eastern	1948	391	127,799	134,261	4,008	3,571	66.5	273,204	146,599	54	1	4	6.8
	1947	391	130,805	136,873	3,840	3,845	64.2	300,428	164,699	57	..	6	9.5
Pennsylvania System	1948	10,023	3,769,114	4,240,069	569,752	134,302	66.2	9,445,520	4,623,590	1,866	2	278	13.0
	1947	10,031	4,183,478	4,733,521	671,898	152,771	65.0	10,875,514	5,274,398	1,946	29	268	11.9
Reading	1948	1,352	483,509	530,472	56,889	16,513	66.3	1,309,173	740,498	224	10	31	11.7
	1947	1,357	529,100	589,978	69,856	17,520	64.1	1,385,860	746,123	244	18	41	16.3
Western Maryland	1948	837	244,017	297,112	44,130	7,898	61.8	673,274	375,450	158	3	11	6.4
	1947	837	227,077	276,109	44,545	7,835	59.7	671,121	365,652	147	4	10	6.2
Pocahontas Region													
Chesapeake & Ohio	1948	4,987	1,774,520	1,909,167	92,349	70,603	59.3	5,886,736	3,404,205	619	4	91	12.7
	1947	4,980	1,717,783	1,848,272	88,273	73,159	58.7	6,105,636	3,434,859	616	3	73	10.5
Norfolk & Western	1948	2,107	892,784	962,388	80,451	38,691	59.6	3,417,851	1,914,889	277	14	22	7.0
	1947	2,108	834,084	904,342	69,231	38,993	60.0	3,352,513	1,865,001	268	26	18	5.8
Southern Region													
Atlantic Coast Line	1948	5,552	1,026,649	1,056,037	15,256	27,082	66.0	1,800,194	823,832	355	1	67	15.8
	1947	5,556	1,170,993	1,188,433	17,189	30,138	65.1	2,013,006	911,261	379	18	44	10.0
Central of Georgia*	1948	1,783	302,019	306,475	5,847	7,614	72.5	495,573	239,064	94	2	9	8.6
	1947	1,782	299,568	304,585	6,331	7,464	72.2	496,857	233,429	97	..	9	8.5
Gulf, Mobile & Ohio	1948	2,847	387,025	394,671	795	16,614	74.8	1,071,549	535,109	181	7	17	8.3
	1947	2,846	440,920	487,473	3,473	16,637	72.2	1,079,445	510,354	197	9	7	3.3
Illinois Central	1948	6,581	1,635,521	1,643,333	56,025	55,120	64.7	3,857,405	1,846,520	584	13	56	8.6
	1947	6,582	1,573,152	1,590,502	57,207	56,661	65.2	3,907,750	1,855,111	591	1	88	12.9
Louisville & Nashville	1948	4,750	1,614,574	1,760,530	54,871	40,205	65.2	2,917,172	1,543,517	409	..	85	17.2
	1947	4,759	1,579,195	1,727,471	48,860	40,404	64.3	2,917,542	1,517,527	386	12	88	18.1
Nash., Chatt. & St. Louis	1948	1,051	305,217	318,609	8,710	6,946	77.7	428,091	210,910	83	..	16	16.2
	1947	1,052	303,592	333,759	8,907	7,049	77.8	432,995	210,482	96	..	18	15.8
Seaboard Air Line	1948	4,141	894,304	958,168	10,918	25,076	67.6	1,704,180	772,234	280	..	47	14.4
	1947	4,145	959,227	1,022,049	15,816	27,537	68.9	1,829,221	824,703	291	..	53	15.4
Southern	1948	6,449	1,750,496	1,779,955	32,618	45,857	69.6	2,939,498	1,344,355	544	21	93	14.1
	1947	6,451	2,081,990	2,117,076	36,810	49,577	71.4	3,116,595	1,431,026	571	..	110	16.2
Northwestern Region													
Chicago & North Western	1948	8,055	963,423	1,011,274	22,826	29,408	69.3	1,946,064	896,944	376	15	95	19.5
	1947	8,061	1,040,777	1,079,815	28,337	31,818	67.4	2,146,834	954,540	336	6	141	27.5
Chicago Great Western	1948	1,445	239,679	239,754	9,714	8,386	70.6	538,378	240,306	61	..	25	29.1
	1947	1,445	279,962	281,556	18,068	8,382	71.6	545,479	250,683	63	..	12	16.0
Chic., Milw., St. P. & Pac.	1948	10,663	1,507,554	1,581,133	71,376	44,046	64.4	3,054,397	1,395,146	501	24	99	15.9
	1947	10,725	1,499,467	1,594,185	65,979	47,105	66.6	3,202,159	1,501,322	480	31	89	14.8
Chic., St. P., Minn. & Omaha	1948	1,606	239,630	255,530	13,958	5,533	66.6	388,941	175,615	87	..	29	25.0
	1947	1,606	236,761	253,107	16,106	5,956	69.9	408,731	191,458	74	..	38	33.9
Duluth, Missabe & Iron Rge.	1948	569	34,399	34,882	868	504	57.7	34,227	15,485	24	9	22	40.0
	1947	547	29,957	30,225	386	502	59.1	34,299	16,178	21	19	16	28.6
Great Northern	1948	8,237	1,101,624	1,103,115	49,910	36,863	66.6	2,505,998	1,157,241	364	55	65	13.4
	1947	8,236	1,152,291	1,155,659	48,651	38,444	67.7	2,634,407	1,216,706	364	38	98	19.6
Minneap., St. P. & S. St. M.	1948	4,180	453,317	466,696	10,316	11,729	68.3	767,448	360,595	126	..	19	13.1
	1947	4,181	462,268	467,090	10,155	12,197	68.9	802,403	383,420	119	..	26	17.9
Northern Pacific	1948	6,613	903,229	956,925	59,607	30,656	65.4	2,179,703	1,027,040	344	22	53	12.6
	1947	6,625	966,511	1,027,488	65,003	34,685	66.8	2,342,913	1,047,613	367	8	61	14.0
Central Western Region													
Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1948	13,081	2,785,040	2,932,520	120,795	97,688	67.7	6,503,939	2,723,787	718	118	129	13.4
	1947	13,107	2,832,748	2,982,216	149,283	98,285	67.1	6,460,370	2,632,566	718	121	128	13.2
Chic., Burl. & Quincy	1948	8,670	1,427,983	1,477,815	49,834	53,067	64.1	3,747,958	1,739,046	429	22	66	12.8
	1947	8,671	1,410,536	1,463,088	61,354	52,373	63.7	3,715,875	1,711,810	456	19	79	14.3
Chic., Rock I. & Pac.*	1948	7,618	1,261,833	1,310,027	23,032	39,374	65.0	2,625,403	1,151,805	315	6	67	17.3
	1947	7,619	1,306,742	1,336,854	21,739	41,042	66.2	2,713,980	1,196,916	320	4	84	20.6
Denver & R. G. Wn.	1948	2,443	401,446	453,375	57,149	12,111	72.0	848,366	433,619	155	32	47	20.1
	1947	2,471	401,606	464,996	61,769	11,697	71.7	810,526	412,363	159	37	40	16.9
Southern Pacific	1948	8,109	1,991,569	2,226,838	429,522	80,950	69.1	5,301,706	2,264,302	722	16	180	19.6
	1947	8,159	2,149,425	2,407,705	424,046	85,077	70.7	5,500,916	2,380,004	726	8	225	23.5
Union Pacific	1948	9,756	2,366,601	2,468,810	177,562	87,555	66.2	5,992,921	2,737,901	635	70	92	11.5
	1947	9,775	2,566,678	2,705,850	218,531	88,272	66.1	6,311,086	2,822,456	691	76	122	13.7
Western Pacific	1948	1,192	835,899	259,347	29,395	9,657	74.7	604,987	281,797	66	41	18	14.4
	1947	1,192	239,832	262,545	28,537	9,676	74.5	613,958	292,344	83	31	20	14.9
Southwestern Region													
International-Gt. Northern*	1948	1,110	257,376	259,759	1,548	6,652	64.8	469,226	208,472	68	..	12	15.0
	1947	1,110	237,085	238,500	651	6,081	66.4	417,144	185,809	73	..	14	16.1
Kansas City Southern	1948	885	209,519	213,470	1,442	9,052	66.8	625,294	295,929	45	1	8	14.3
	1947	885	213,594	239,808	5,073	8,505	71.7	573,110	286,493	63	..	13	17.1
Mo.-Kans.-Texas Lines	1948	3,241	487,401	496,484	8,289	15,476	65.2	1,017,347	448,075	124	2	29	18.7
	1947	3,241	525,011	538,493	9,296	14,139	66.0	930,347	411,909	116	..	52	31.0
Missouri Pacific*	1948	6,986	1,550,838	1,599,997	38,616	50,948	65.8	3,474,003	1,564,221	458	..	48	9.5
	1947	7,011	1,561,689	1,623,965	43,586	49,907	66.6	3,389,055	1,536,689	423	5	62	12.7
Texas & Pacific	1948	1,852	531,830	531,830	16,078	16,163	63.8	1,100,889	465,468	118	2	9	7.0
	1947	1,871	391,480	391,480	6,983	12,596	67.7	849,836	339,910	102	37	15	9.7
St. Louis-San Francisco	1948	4,615	942,050	986,657	11,690	23,310	68.0	1,565,563	702,049	298	3	35	10.4
	1947	4,615	972,249	1,011,765	11,813	23,091	69.2	1,534,324	704,582	292	15	26	7.8
St. Louis Southw. Lines	1948	1,568	419,319	420,781	5,961	15,722	73.4	932,660	416,912	88	6	12	11.3
	1947	1,568	352,373	355,259	4,697	14,311	78.9	831,684	371,774	83	8	21	18.8
Texas & New Orleans	1948	4,314	1,011,622	1,011,995	28,089	27,369	62.3	1,818,592	791,919	222	..	26	10.5
	1947	4,318	988,918	989,558	26,119	26,572	75.9	1,655,064	751,468	210	..	33	13.6

*Report of trustee or trustees.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

Items for the Month of January 1948 Compared with January 1947

	Region, road and year		Freight cars on line				G.t.m.per train-hr. excl.locos and tenders	G.t.m.per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day
			Home	Foreign	Total	Per Cent B. O.									
New Eng. Region	Boston and Albany	1948	201	6,852	7,053	0.3	16,842	1,260	538	26.2	327	18.0	6,062	247	70.3
		1947	298	6,957	7,255	0.3	19,911	1,433	573	24.5	412	25.6	7,712	207	79.9
	Boston & Maine	1948	1,332	14,992	16,324	2.2	28,652	2,084	904	26.9	666	34.6	5,530	131	109.7
		1947	1,469	11,575	13,044	2.0	32,676	2,246	986	27.0	790	40.9	6,058	115	86.7
	N. Y., N. H. & Htfd.	1948	1,468	29,448	30,916	1.3	25,985	2,079	951	26.6	391	19.7	5,720	91	99.6
		1947	1,286	19,996	21,282	1.6	30,064	2,184	946	25.4	569	31.6	6,759	101	84.9
Great Lakes Region	Delaware & Hudson	1948	1,743	7,752	9,495	3.7	48,352	2,875	1,584	38.4	1,521	57.8	18,045	132	72.1
		1947	2,042	8,354	10,396	2.8	50,401	3,025	1,637	38.5	1,613	60.5	20,200	122	69.3
	Del., Lack. & Western	1948	3,772	13,749	17,521	3.9	36,974	2,524	1,146	29.9	696	35.5	12,373	136	107.0
		1947	4,076	14,015	18,091	3.3	42,884	2,724	1,239	29.8	741	35.9	13,742	122	87.1
	Erie	1948	5,661	25,167	30,826	4.6	48,322	3,127	1,356	27.6	1,022	53.3	13,842	118	79.3
		1947	5,388	26,682	32,070	2.5	51,435	3,138	1,359	28.1	1,016	53.5	14,978	108	80.3
	Grand Trunk Western	1948	3,595	11,214	14,809	5.5	34,355	1,923	838	27.5	499	25.7	7,782	103	137.3
		1947	3,197	11,120	14,317	5.0	38,615	2,032	896	27.5	544	28.1	8,115	101	130.9
	Lehigh Valley	1948	5,244	15,048	20,292	7.4	45,255	2,678	1,300	32.3	662	29.2	10,523	121	85.0
		1947	4,140	16,608	20,748	3.5	50,318	3,042	1,474	32.6	771	34.1	12,028	118	83.0
	New York Central	1948	45,685	126,978	172,663	3.0	33,806	2,428	1,155	32.9	697	32.6	11,234	133	96.1
		1947	43,048	124,617	167,665	2.9	36,758	2,617	1,225	32.6	805	38.9	12,680	120	99.6
	New York, Chic. & St. L.	1948	2,272	13,345	15,617	1.8	45,441	2,390	1,075	28.6	1,580	78.8	14,351	104	144.9
		1947	1,721	15,596	17,317	1.5	46,217	2,522	1,125	28.8	1,438	72.6	14,560	98	144.8
	Pitts. & Lake Erie	1948	3,039	8,659	11,698	6.5	46,037	3,153	1,828	48.7	493	15.7	28,127	120	85.2
		1947	2,629	7,696	10,325	4.8	48,911	3,317	1,901	47.7	520	17.1	28,459	108	76.8
	Wabash	1948	4,991	15,290	20,281	2.4	42,570	2,216	999	28.3	1,038	50.0	8,809	128	116.0
		1947	4,944	15,031	19,975	1.8	43,439	2,295	1,057	29.0	1,072	50.4	9,190	120	113.5
Central Eastern Region	Baltimore & Ohio	1948	37,910	46,692	84,602	6.3	29,059	2,406	1,208	36.5	958	40.1	13,118	176	86.1
		1947	32,815	51,267	84,082	4.8	30,520	2,468	1,218	35.8	973	42.3	13,210	163	83.4
	Central of New Jersey*	1948	761	11,779	12,540	3.6	35,054	2,896	1,519	38.9	322	12.5	9,137	125	78.8
		1947	485	9,576	10,061	2.5	32,978	2,612	1,350	37.2	367	14.8	8,954	151	68.9
	Central of Pennsylvania	1948	714	4,413	5,127	7.3	35,925	2,866	1,584	40.2	750	26.4	17,932	137	72.0
		1947	1,211	3,703	4,914	6.0	34,989	2,768	1,501	39.2	813	30.4	18,664	140	63.7
	Chicago & Eastern Ill.	1948	1,687	4,465	6,152	3.9	35,451	2,070	1,056	34.2	1,033	42.6	6,619	131	90.0
		1947	1,529	4,059	5,588	4.5	32,455	1,926	984	34.1	1,044	43.0	6,614	132	89.8
	Elgin, Joliet & Eastern	1948	5,845	13,432	19,277	2.0	12,356	2,300	1,234	41.1	249	9.1	12,095	171	120.9
		1947	6,441	17,077	23,518	1.0	13,416	2,458	1,347	42.8	237	8.6	13,588	170	127.7
	Pennsylvania System	1948	112,311	130,227	242,538	9.6	33,014	2,597	1,271	34.4	623	27.4	14,881	143	78.6
		1947	116,031	127,923	243,954	9.5	35,072	2,699	1,309	34.5	695	30.9	16,962	139	84.5
	Reading	1948	8,437	25,688	34,125	3.3	33,081	2,720	1,538	44.8	690	23.2	17,668	117	82.1
		1947	9,649	25,566	35,215	2.7	34,990	2,578	1,413	42.6	683	25.0	17,737	115	77.3
	Western Maryland	1948	2,873	4,931	7,804	.9	28,973	2,816	1,570	47.5	1,597	54.4	14,470	166	69.1
		1947	2,785	5,051	7,836	1.0	31,184	2,990	1,629	46.7	1,433	51.4	14,092	170	69.1
Pocahontas Region	Chesapeake & Ohio	1948	42,711	24,671	67,382	1.9	50,574	3,376	1,952	48.2	1,550	54.2	22,020	98	98.4
		1947	37,381	27,553	64,934	1.8	52,801	3,621	2,037	47.0	1,625	59.0	22,249	89	97.9
	Norfolk & Western	1948	26,003	7,969	33,972	1.2	58,792	3,902	2,186	49.5	1,665	56.5	29,317	107	115.5
		1947	24,696	8,536	33,232	.9	61,727	4,083	2,271	47.8	1,713	59.7	28,540	98	107.1
Southern Region	Atlantic Coast Line	1948	8,666	21,817	30,483	4.2	27,030	1,759	805	30.4	892	44.5	4,787	132	87.8
		1947	7,796	25,213	33,009	3.0	27,168	1,727	782	30.2	890	45.2	5,291	124	94.4
	Central of Georgia*	1948	1,802	6,315	8,117	4.3	29,169	1,645	793	31.4	909	39.9	4,325	141	102.0
		1947	1,249	6,809	8,058	1.7	30,644	1,665	782	31.3	892	39.5	4,226	136	102.7
	Gulf, Mobile & Ohio	1948	2,554	12,556	15,120	1.7	51,529	2,776	1,386	32.2	1,086	45.1	6,063	85	66.2
		1947	2,357	11,478	13,835	1.4	43,542	2,453	1,160	30.7	1,144	51.6	5,785	97	80.5
	Illinois Central	1948	15,711	37,038	52,749	1.4	39,756	2,410	1,149	35.5	1,134	52.3	9,051	142	88.9
		1947	14,978	35,430	50,408	1.0	41,916	2,543	1,207	32.7	1,234	57.8	9,092	139	83.1
	Louisville & Nashville	1948	26,289	18,696	44,985	3.4	26,222	1,807	956	38.4	1,095	43.8	10,482	151	125.3
		1947	23,588	19,076	42,664	3.1	27,052	1,847	961	37.6	1,142	47.2	10,286	140	122.9
	Nashville, Chatt. & St. Louis	1948	1,485	5,803	7,288	5.4	26,754	1,406	693	30.4	899	38.1	6,473	149	110.1
		1947	851	5,900	6,751	1.9	26,780	1,432	696	29.9	933	40.1	6,454	141	108.5
	Seaboard Air Line	1948	6,134	16,372	22,506	1.5	32,756	1,957	887	30.8	1,088	52.3	6,016	127	104.0
		1947	5,036	21,678	26,714	1.5	31,457	1,966	886	29.9	1,017	49.3	6,418	125	110.4
	Southern	1948	12,302	32,652	44,954	3.7	28,155	1,699	777	29.3	965	47.3	6,724	138	94.2
		1947	12,634	36,166	48,800	3.8	25,389	1,517	697	28.9	972	47.1	7,156	145	104.9
Northwestern Region	Chicago & North Western	1948	17,179	35,866	53,045	3.4	28,939	2,118	976	30.5	547	25.9	3,592	148	75.3
		1947	16,102	37,335	53,437	4.3	30,198	2,156	959	30.0	570	28.2	3,820	152	76.7
	Chicago Great Western	1948	1,022	4,730	5,752	3.5	35,725	2,249	1,004	28.7	1,363	67.3	5,365	144	99.6
		1947	877	5,508	6,385	2.2	32,079	1,952	897	29.9	1,303	60.9	5,596	146	133.1
	Chic., Milw., St. P. & Pac.	1948	20,063	50,184	70,247	2.0	29,472	2,052	937	31.7	649	31.8	4,221	145	92.8
		1947	18,193	45,431	63,624	1.6	33,040	2,155	1,011	31.9	794	37.4	4,516	134	96.0
	Chic., St. P., Minn. & Omaha	1948	736	8,459	9,195	4.9	20,954	1,678	758	31.7	624	29.5	3,527	137	82.9
		1947	682	7,961	8,653	5.0	22,752	1,775	832	32.1	735	32.7	3,846	133	80.7
	Duluth, Missabe & Iron Range	1948	14,324	467	14,791	2.6	13,046	1,043	472	30.7	33	1.9	878	227	25.0
		1947	14,834	572	15,406	2.4	16,348	1,203	568	32.2	34	1.8	954	198	22.6
	Great Northern	1948	18,802	25,400	44,202	2.7	35,406	2,296	1,060	31.4	829	39.7	4,532	126	82.9
		1947	17,099	21,503	38,602	2.1	36,113	2,310	1,067	31.6	984	45.9	4,765	123	82.7
	Minneap., St. P. & S. St. M.	1948	5,636	10,573	16,209	4.0	28,225	1,709	803	30.7	729	34.7	2,783	123	117.3
		1947	4,686	8,415	13,101	4.1	29,688	1,752	837	31.4	951	43.9	2,958	116	116.9
	Northern Pacific	1948	16,025	21,455	37,480	4.7	39,995	2,437	1,148	33.5	914	41.7	5,010	160	85.4
		1947	15,273	17,644	32,917	3.6	38,199	2,434	1,088	30.2	1,027	50.9	5,101	161	87.8
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1948	35,703	33,643	69,346	5.8	46,633	2,353	985	27.8	1,220	64.7	6,717	111	107.8
		1947	35,309	39,813	75,122	4.8	44,732	2,296	936	26.8	1,096	61.0	6,479	115	111.1
	Chic., Burl. & Quincy	1948	12,589	30,214	42,803	2.6	44,419	2,638	1,224	32.8	1,207	57.4	6,470	114	98.9
		1947	15,948	27,837	43,785	2.8	43,610	2,650	1,221	32.7	1,290	62.0	6,368	111	94.3
	Chic., Rock I. & Pac.*	1948	8,744	26,051	34,795	4.2	35,804	2,089	918	29.3	1,081	56.8	4,886	120	115.5
		1947	8,676	27,327	36,003	2.6	35,530	2,090	922	29.2	1,111	57.5	5,068	114	112.0
	Denver & R. G. Wn.	1948	6,712	6,816	13,528	4.5	34,755	2,132	1,090	35.8	1,026	35.8	5,726	183	75.0
		1947	6,578	6,730	13,308	4.1	31,714	2,036	1,036	35.3	990	39.1	5,387	193	75.7
	Southern Pacific	1948	21,778	39,704	61,482	2.7	43,842	2,693	1,150	28.0	1,154	59.7	9,008	102	98.5
		1947	21,878	40,952	62,830	2.8	39,885	2,586	1,119	28.0	1,145	57.9	9,410	113	99.9
	Union Pacific	1948	24,401	31,327	55,728	3.6	51,448	2,564	1,172	31.3	1,473	71.2	9,053	134	111.7
		1947	23,830	42,822	66,652	2.3	46,195	2,487	1,112	32.0	1,409	66.6	9,314	138	110.6
	Western Pacific	1948	1,928	3,015	4,943	6.7	55,945	2,582	1,202	29.2	1,783	81.8	7,626	62	76.2
		1947	2,615	3,296	5,911	4.7	51,369	2,606	1,241	30.2	1,586	70.5	7,911	68	70.3
Southwestern Region	International-Gt. Northern*	1948	402	6,268	6,670	1.0	33,953	1,849	822	31.3	945	46.5	6,058	124	104.9
		1947	303	5,992	6,295	1.3	33,031	1,780	793	30.6	915	45.1	5,400	112	102.7
	Kansas City Southern	1948	1,122	5,735	6,857	3.1	58,996	3,006	1,423	32.7	1,453	66.6	10,787	115	129.6
		1947	962	6,282	7,244	2.5	45,205	2,702	1,351	33.7	1,264	52.3	10,443	116	115.4
	Mo.-Kans.-Texas Lines	1948	1,638	8,802	9,840	.6	38,715	2,097	924	29.0	1,434	75.9	4,460	104	109.5
		1947	1,224	8,536	9,760	.9	34,147	1,782	789	29.1	1,368	71.1	4,100	93	109.7
	Missouri Pacific*	1948	13,605	25,486	39,091	1.9	40,658	2,256	1,016	30.7	1,318	65.2	7,223	117	111.4
		1947	14,624	26,189	40,813	1.9	38,853	2,186	991	30.8	1,203	58.7	7,070	121	113.8
	Texas & Pacific	1948	1,430	8,626	10,056	2.1	37,874	2,100	888	28.8	1,442	78.5	8,108	103	146.5
		1947	1,010	7,037	8,047	2.3	43,154	2,184	874	27.0	1,378	79.0	5,860	98	87.6
	St. Louis-San Francisco	1948	5,125	14,607	19,732	1.4	33,316	1,668	748	30.1	1,154	56.4	4,907	140	102.5
		1947	4,629	15,544	20,173	1.7	31,692	1,584	727	30.5	1,174	55.5	4,925	140	104.5
	St. Louis Southw. Lines	1948	1,283	5,886	7,169	2.4	42,761	2,228	996	26.5	2,017	103.6	8,577	88	141.9
		1947	1,057	5,484	6,551	2.1	47,914	2,364	1,057	26.0	1,931	94.2	7,648	86	109.1
	Texas & New Orleans	1948	3,666	16,027	19,693	2.2	36,092	1,816	791	28.9	1,356	67.6	5,922	90	142.0
		1947	2,909	16,439	19,348	2.2	33,172	1,695	770	28.3	1,295	60.3	5,614	93	140.3

*Report of trustee or trustees.

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One of the most important passenger coach developments since the war is the program of 103 deluxe coaches now nearing completion by Pullman-Standard Car Manufacturing Company for the New York, New Haven & Hartford Railway at a cost of more than $10,000,000. That's why *Railway Age* has planned a comprehensive editorial and advertising feature on these cars for its June 5 issue — a feature typical of the thorough descriptive articles which it has published on every major passenger car improvement since the beginning of the streamlined era.

How important these descriptions are considered (many railway officers keep them for reference as part of their planning information) is evidenced by the following forthright statement made some time ago in a report issued by a prominent firm of consulting engineers: "Perhaps no instrumentality not directly engaged in the construction or operation of railroad trains has done more to promote and encourage the introduction of new types of passenger equipment on American railroads than has the *Railway Age*."

Railway Age passenger car features will be an important editorial service during the months ahead. Not only do the railroads have some 2,300 modern passenger cars on order, but, as William T. Faricy, President of the Association of American Railroads' stated earlier this year, "the railroads are going ahead with their plans for improvements — their orders for 1,200 new locomotives this year, for nearly 120,000 new freight cars, *for all the passenger cars that can be built* . . . and for improvements in every part of the vast and complex business of railroading."

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Items for the Month of January 1948 Compared with January 1947

	Region, road and year	Freight cars on line: Home	Foreign	Total	Per Cent B. O.	G.t.m.per train-hr. excl.locos and tenders	G.t.m.per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day
New Eng. Region	Boston and Albany	1948 201	6,852	7,053	0.3	16,842	1,260	538	26.2	327	18.0	6,062	247	70.3
		1947 298	6,957	7,255	0.3	19,911	1,433	573	24.5	412	25.6	7,712	207	79.9
	Boston & Maine	1948 1,332	14,992	16,324	2.2	28,652	2,084	904	26.9	666	34.6	5,530	131	109.7
		1947 1,469	11,575	13,044	2.0	32,676	2,246	986	27.0	790	40.9	6,058	115	86.7
	N. Y., N. H. & Htfd.	1948 1,468	29,448	30,916	1.3	25,985	2,079	951	26.6	391	19.7	5,720	91	99.6
		1947 1,286	19,996	21,282	1.6	30,064	2,184	946	25.4	569	31.6	6,759	101	84.9
Great Lakes Region	Delaware & Hudson	1948 1,743	7,752	9,495	3.7	48,352	2,875	1,584	38.4	1,521	57.8	18,045	132	72.1
		1947 2,042	8,354	10,396	2.8	50,401	3,025	1,637	38.5	1,613	60.5	20,200	122	69.3
	Del., Lack. & Western	1948 3,772	13,749	17,521	3.9	36,974	2,524	1,146	29.9	696	35.5	12,373	136	107.0
		1947 4,076	14,015	18,091	3.3	42,884	2,724	1,239	29.8	741	35.9	13,742	122	87.1
	Erie	1948 5,661	25,167	30,826	4.6	48,322	3,127	1,356	27.6	1,022	53.3	13,842	118	79.3
		1947 5,388	26,682	32,070	2.5	51,435	3,138	1,359	28.1	1,016	53.5	14,978	108	80.3
	Grand Trunk Western	1948 3,595	11,214	14,809	5.5	34,355	1,923	838	27.5	499	25.7	7,782	103	137.3
		1947 3,197	11,120	14,317	5.0	38,615	2,032	896	27.5	544	28.1	8,115	101	130.9
	Lehigh Valley	1948 5,244	15,048	20,292	7.4	45,255	2,678	1,300	32.3	662	29.2	10,523	121	85.0
		1947 4,140	16,608	20,748	3.5	50,318	3,042	1,474	32.6	771	34.1	12,028	118	83.0
	New York Central	1948 45,685	126,978	172,663	3.0	33,806	2,428	1,155	32.9	697	32.6	11,234	133	96.1
		1947 43,048	124,617	167,665	2.9	36,758	2,617	1,225	32.6	805	38.9	12,680	120	99.6
	New York, Chic. & St. L.	1948 2,272	13,345	15,617	1.8	45,441	2,390	1,075	28.6	1,580	78.8	14,351	104	144.9
		1947 1,721	15,596	17,317	1.5	46,217	2,522	1,125	28.8	1,438	72.6	14,560	98	144.8
	Pitts. & Lake Erie	1948 3,039	8,659	11,698	6.5	46,037	3,153	1,828	48.7	493	15.7	28,127	120	85.2
		1947 2,629	7,696	10,325	4.8	48,911	3,317	1,901	47.7	520	17.1	28,459	108	76.8
	Wabash	1948 4,991	15,290	20,281	2.4	42,570	2,216	999	28.3	1,038	50.0	8,809	128	116.0
		1947 4,944	15,031	19,975	1.8	43,439	2,295	1,057	29.0	1,072	50.4	9,190	120	113.5
Central Eastern Region	Baltimore & Ohio	1948 37,910	46,692	84,602	6.3	29,059	2,406	1,208	36.5	958	40.1	13,118	176	86.1
		1947 32,815	51,267	84,082	4.8	30,520	2,468	1,218	35.8	973	42.3	13,210	163	83.4
	Central of New Jersey*	1948 761	11,779	12,540	3.6	35,054	2,896	1,519	38.9	322	12.5	9,137	125	78.8
		1947 485	9,576	10,061	2.5	32,978	2,612	1,350	37.2	367	14.8	8,954	151	68.9
	Central of Pennsylvania	1948 714	4,413	5,127	7.3	35,925	2,866	1,584	40.2	750	26.4	17,932	137	72.0
		1947 1,211	3,703	4,914	6.0	34,989	2,768	1,501	39.2	813	30.4	18,664	140	63.7
	Chicago & Eastern Ill.	1948 1,687	4,465	6,152	3.9	35,451	2,070	1,056	34.2	1,033	42.6	6,619	131	90.0
		1947 1,529	4,059	5,588	4.5	32,455	1,926	984	34.1	1,044	43.0	6,614	132	89.8
	Elgin, Joliet & Eastern	1948 5,845	13,432	19,277	2.0	12,356	2,300	1,234	41.1	249	9.1	12,095	171	120.9
		1947 6,441	17,077	23,518	1.0	13,416	2,458	1,347	42.8	237	8.6	13,588	170	127.7
	Pennsylvania System	1948 112,311	130,227	242,538	9.6	33,014	2,597	1,271	34.4	623	27.4	14,881	143	78.6
		1947 116,031	127,923	243,954	9.5	35,072	2,699	1,309	34.5	695	30.9	16,962	139	84.5
	Reading	1948 8,437	25,688	34,125	3.3	33,081	2,720	1,538	44.8	690	23.2	17,668	117	82.1
		1947 9,649	25,566	35,215	2.7	34,990	2,578	1,413	42.6	683	25.0	17,737	115	77.3
	Western Maryland	1948 2,873	4,931	7,804	.9	28,973	2,816	1,570	47.5	1,597	54.4	14,470	166	69.1
		1947 2,785	5,051	7,836	1.0	31,184	2,990	1,629	46.7	1,433	51.4	14,092	170	69.1
Pocahontas Region	Chesapeake & Ohio	1948 42,711	24,671	67,382	1.9	50,574	3,376	1,952	48.2	1,550	54.2	22,020	98	98.4
		1947 37,381	27,553	64,934	1.8	52,801	3,621	2,037	47.0	1,625	59.0	22,249	89	97.9
	Norfolk & Western	1948 26,003	7,969	33,972	1.2	58,792	3,902	2,186	49.5	1,665	56.5	29,317	107	115.5
		1947 24,696	8,536	33,232	.9	61,727	4,083	2,271	47.8	1,713	59.7	28,540	98	107.1
Southern Region	Atlantic Coast Line	1948 8,666	21,817	30,483	4.2	27,030	1,759	805	30.4	892	44.5	4,787	132	87.8
		1947 7,796	25,213	33,009	3.0	27,168	1,727	782	30.2	890	45.2	5,291	124	94.4
	Central of Georgia*	1948 1,802	6,315	8,117	4.3	29,169	1,645	793	31.4	909	39.9	4,325	141	102.0
		1947 1,249	6,809	8,058	1.7	30,644	1,665	782	31.3	892	39.5	4,226	136	102.7
	Gulf, Mobile & Ohio	1948 2,554	12,556	15,120	1.7	51,529	2,776	1,386	32.2	1,086	45.1	6,063	85	66.2
		1947 2,357	11,478	13,835	1.4	43,542	2,453	1,160	30.7	1,144	51.6	5,785	97	80.5
	Illinois Central	1948 15,711	37,038	52,749	1.4	39,756	2,410	1,149	35.5	1,134	52.3	9,051	142	88.9
		1947 14,978	35,430	50,408	1.0	41,916	2,543	1,207	32.7	1,234	57.8	9,092	139	83.1
	Louisville & Nashville	1948 26,289	18,696	44,985	3.4	26,222	1,807	956	38.4	1,095	43.8	10,482	151	125.3
		1947 23,588	19,076	42,664	3.1	27,052	1,847	961	37.6	1,142	47.2	10,286	140	122.9
	Nashville, Chatt. & St. Louis	1948 1,485	5,803	7,288	5.4	26,754	1,406	693	30.4	899	38.1	6,473	149	110.1
		1947 851	5,900	6,751	1.9	26,780	1,432	696	29.9	933	40.1	6,454	141	108.5
	Seaboard Air Line	1948 6,134	16,372	22,506	1.5	32,756	1,957	887	30.8	1,088	52.3	6,016	127	104.0
		1947 5,036	21,678	26,714	1.5	31,457	1,966	886	29.9	1,017	49.3	6,418	125	110.4
	Southern	1948 12,302	32,652	44,954	3.7	28,155	1,699	777	29.3	965	47.3	6,724	138	94.2
		1947 12,634	36,166	48,800	3.8	25,389	1,517	697	28.9	972	47.1	7,156	145	104.9
Northwestern Region	Chicago & North Western	1948 17,179	35,866	53,045	3.4	28,939	2,118	976	30.5	547	25.9	3,592	148	75.3
		1947 16,102	37,335	53,437	4.3	30,198	2,156	959	30.0	570	28.2	3,820	152	76.7
	Chicago Great Western	1948 1,022	4,730	5,752	3.5	35,725	2,249	1,004	28.7	1,363	67.3	5,365	144	99.6
		1947 877	5,508	6,385	2.2	32,079	1,952	897	29.9	1,303	60.9	5,596	146	133.1
	Chic., Milw., St. P. & Pac.	1948 20,063	50,184	70,247	2.0	29,472	2,052	937	31.7	649	31.8	4,221	145	92.8
		1947 18,193	45,431	63,624	1.6	33,040	2,155	1,011	31.9	794	37.4	4,516	134	96.0
	Chic., St. P., Minn. & Omaha	1948 736	8,459	9,195	4.9	20,954	1,678	758	31.7	624	29.5	3,527	137	82.9
		1947 682	7,961	8,653	5.0	22,752	1,775	832	32.1	735	32.7	3,846	133	80.7
	Duluth, Missabe & Iron Range	1948 14,324	467	14,791	2.6	13,046	1,043	472	30.7	33	1.9	878	227	25.0
		1947 14,834	572	15,406	2.4	16,348	1,203	568	32.2	34	1.8	954	198	22.6
	Great Northern	1948 18,802	25,400	44,202	2.7	35,406	2,296	1,060	31.4	829	39.7	4,532	126	82.9
		1947 17,099	21,503	38,602	2.1	36,113	2,310	1,067	31.6	984	45.9	4,765	123	82.7
	Minneap., St. P. & S. St. M.	1948 5,636	10,573	16,209	4.0	28,225	1,709	803	30.7	729	34.7	2,783	123	117.3
		1947 4,686	8,415	13,101	4.1	29,688	1,752	837	31.4	951	43.9	2,958	116	116.9
	Northern Pacific	1948 16,025	21,455	37,480	4.7	39,995	2,437	1,148	33.5	914	41.7	5,010	160	85.4
		1947 15,273	17,644	32,917	3.6	38,199	2,434	1,088	30.2	1,027	50.9	5,101	161	87.8
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.)	1948 35,703	33,643	69,346	5.8	46,633	2,353	985	27.8	1,220	64.7	6,717	111	107.8
		1947 35,309	39,813	75,122	4.8	44,732	2,296	936	26.8	1,096	61.0	6,479	115	111.1
	Chic., Burl. & Quincy	1948 12,589	30,214	42,803	2.6	44,419	2,638	1,224	32.8	1,207	57.4	6,470	114	98.9
		1947 15,948	27,837	43,785	2.8	43,610	2,650	1,221	32.7	1,290	62.0	6,368	111	94.3
	Chic., Rock I. & Pac.*	1948 8,744	26,051	34,795	4.2	35,804	2,089	918	29.3	1,081	56.8	4,886	120	115.5
		1947 8,676	27,327	36,003	2.6	35,530	2,090	922	29.2	1,111	57.5	5,068	114	112.0
	Denver & R. G. Wn.	1948 6,712	6,816	13,528	4.5	34,755	2,132	1,090	35.8	1,026	35.8	5,726	183	75.0
		1947 6,578	6,730	13,308	4.1	31,714	2,036	1,036	35.3	990	39.1	5,387	193	75.7
	Southern Pacific	1948 21,778	39,704	61,482	2.7	43,842	2,693	1,150	28.0	1,154	59.7	9,008	102	98.5
		1947 21,878	40,952	62,830	2.8	39,885	2,586	1,119	28.0	1,145	57.9	9,410	113	99.9
	Union Pacific	1948 24,401	31,327	55,728	3.6	51,448	2,564	1,172	31.3	1,473	71.2	9,053	134	111.7
		1947 23,830	42,822	66,652	2.3	46,195	2,487	1,112	32.0	1,409	66.6	9,314	138	110.6
	Western Pacific	1948 1,928	3,015	4,943	6.7	55,945	2,582	1,202	29.2	1,783	81.8	7,626	62	76.2
		1947 2,615	3,296	5,911	4.7	51,369	2,606	1,241	30.2	1,586	70.5	7,911	68	70.3
Southwestern Region	International-Gt. Northern*	1948 402	6,268	6,670	1.0	33,953	1,849	822	31.3	945	46.5	6,058	124	104.9
		1947 303	5,992	6,295	1.3	33,031	1,780	793	30.6	915	45.1	5,400	112	102.7
	Kansas City Southern	1948 1,122	5,735	6,857	3.1	58,996	3,006	1,423	32.7	1,453	66.6	10,787	115	129.6
		1947 962	6,282	7,244	2.5	45,205	2,702	1,351	33.7	1,264	52.3	10,443	116	115.4
	Mo.-Kans.-Texas Lines	1948 1,638	8,802	9,840	.6	38,715	2,097	924	29.0	1,434	75.9	4,460	104	109.5
		1947 1,224	8,536	9,760	.9	34,147	1,782	789	29.1	1,368	71.1	4,100	93	109.7
	Missouri Pacific*	1948 13,605	25,486	39,091	1.9	40,658	2,256	1,016	30.7	1,318	65.2	7,223	117	111.4
		1947 14,624	26,189	40,813	1.9	38,853	2,186	991	30.8	1,203	58.7	7,070	121	113.8
	Texas & Pacific	1948 1,430	8,626	10,056	2.1	37,874	2,100	888	28.8	1,442	78.5	8,108	103	146.5
		1947 1,010	7,037	8,047	2.3	43,154	2,184	874	27.0	1,378	79.0	5,860	98	87.6
	St. Louis-San Francisco	1948 5,125	14,607	19,732	1.4	33,316	1,668	748	30.1	1,154	56.4	4,907	140	102.5
		1947 4,629	15,544	20,173	1.7	31,692	1,584	727	30.5	1,174	55.5	4,925	140	104.5
	St. Louis Southw. Lines	1948 1,283	5,886	7,169	2.4	42,761	2,228	996	26.5	2,017	103.6	8,577	88	141.9
		1947 1,057	5,484	6,551	2.1	47,914	2,364	1,057	26.0	1,931	94.2	7,648	86	109.1
	Texas & New Orleans	1948 3,666	16,027	19,693	2.2	36,092	1,816	791	28.9	1,356	67.6	5,922	90	142.0
		1947 2,909	16,439	19,348	2.2	33,172	1,695	770	28.3	1,295	60.3	5,614	93	140.3

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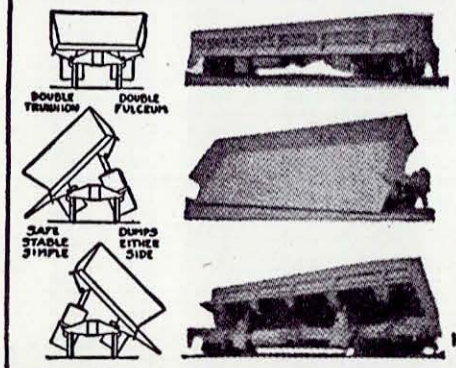

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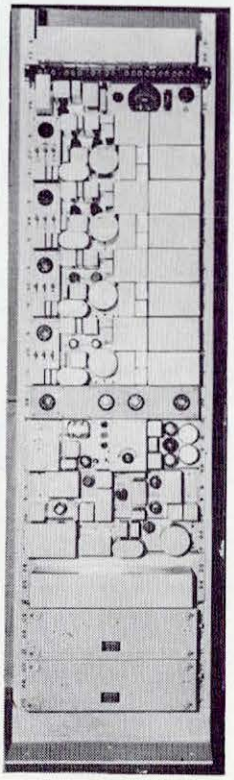

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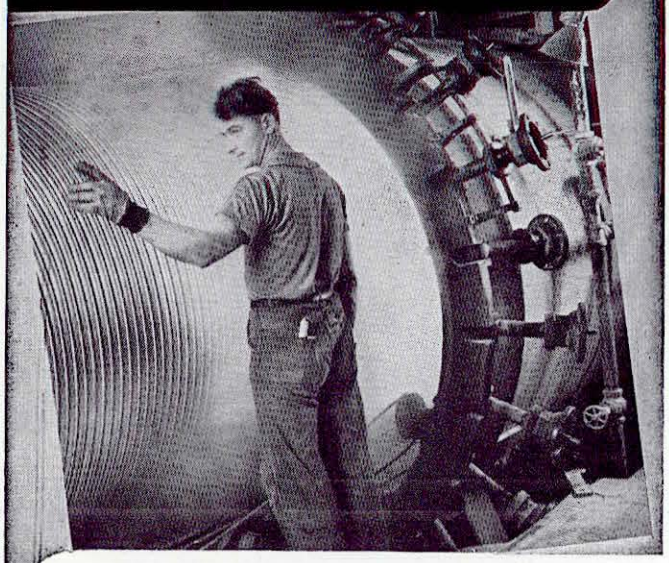

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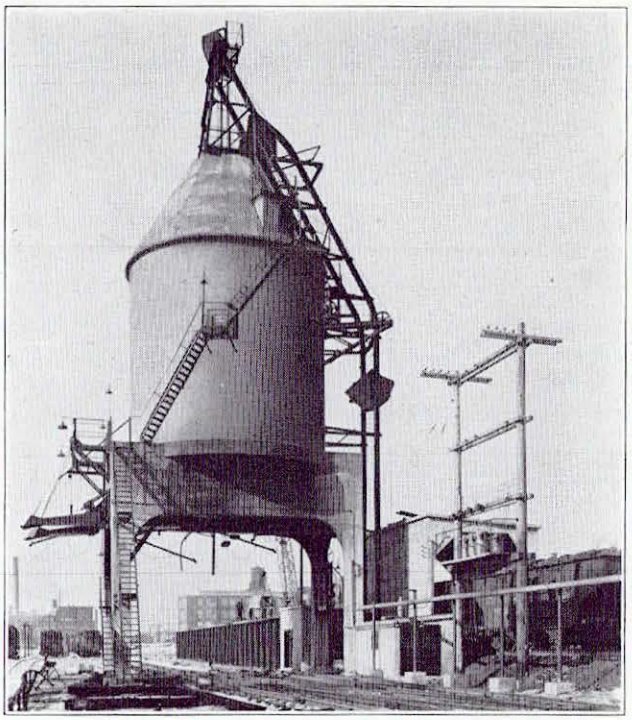

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One of the most important passenger coach developments since the war is the program of 103 deluxe coaches now nearing completion by Pullman-Standard Car Manufacturing Company for the New York, New Haven & Hartford Railway at a cost of more than $10,000,000. That's why *Railway Age* has planned a comprehensive editorial and advertising feature on these cars for its June 5 issue — a feature typical of the thorough descriptive articles which it has published on every major passenger car improvement since the beginning of the streamlined era.

How important these descriptions are considered (many railway officers keep them for reference as part of their planning information) is evidenced by the following forthright statement made some time ago in a report issued by a prominent firm of consulting engineers: "Perhaps no instrumentality not directly engaged in the construction or operation of railroad trains has done more to promote and encourage the introduction of new types of passenger equipment on American railroads than has the *Railway Age*."

Railway Age passenger car features will be an important editorial service during the months ahead. Not only do the railroads have some 2,300 modern passenger cars on order, but, as William T. Faricy, President of the Association of American Railroads' stated earlier this year, "the railroads are going ahead with their plans for improvements — their orders for 1,200 new locomotives this year, for nearly 120,000 new freight cars, *for all the passenger cars that can be built . . .* and for improvements in every part of the vast and complex business of railroading."

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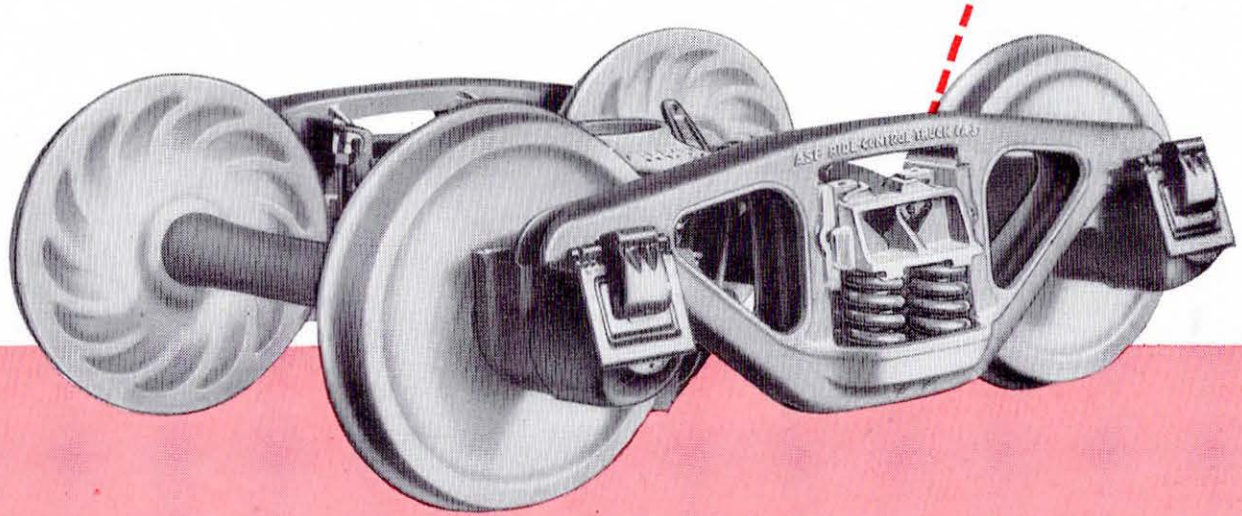

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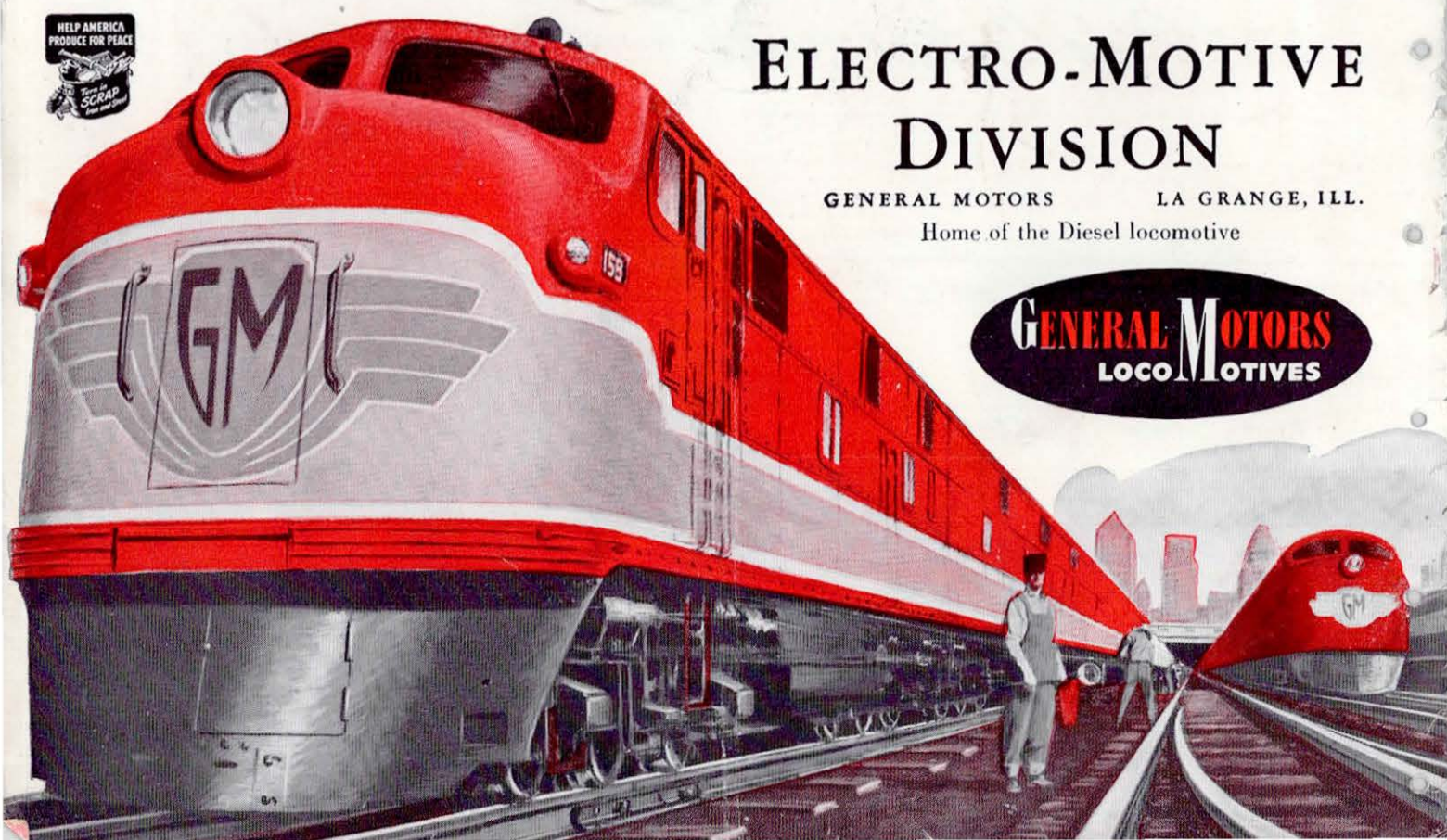

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